



BRIGHAM AND WOMEN’S HOSPITAL/HARVARD SCHOOL OF DENTAL MEDICINE

ORAL MEDICINE RESIDENCY PROGRAM

Accredited by the Commission on Dental Accreditation (last accreditation in 2015)

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INTRODUCTION

The Advanced Graduate Education (AGE) program in Oral Medicine at Harvard School of Dental Medicine (HSDM) & Brigham and Women's Hospital (BWH) is an intensive training program for dentists committed to pursuing a full-time academic and/or institutional career. Trainees are co-appointed as Residents at Brigham Hospital (BWH) and Harvard School of Dental Medicine (HSDM). Clinical training is based at BWH with additional rotations at other Harvard affiliated teaching hospitals including Dana-Farber Cancer Institute, Massachusetts General Hospital, and Massachusetts Eye and Ear Infirmary.

The program is fully accredited by the Commission on Dental Accreditation (CODA).

The program is composed of three training tracks:

- (I) CERTIFICATE ONLY**
- (II) CERTIFICATE AND MASTER OF MEDICAL SCIENCES DEGREE**
- (II) CERTIFICATE AND DOCTOR OF MEDICAL SCIENCES DEGREE**

Certificate Only

This is an intensive 36-month training program, with stipend support, for dentists committed to pursuing a full-time academic and/or institutional career. This program culminates in the awarding of a *clinical certificate* in Oral Medicine. Salary and benefits follow the Partners Resident Salary Scale for PGY1, PGY2 and PGY3. There are no associated tuition fees. Trainees in this track are encouraged to consider pursuing further training in clinical research through various available mechanisms to best prepare for a successful academic and/or institutional career.

Certificate and Master of Medical Sciences

This is a four-year program (three years of tuition and a one-year facilities fee) with master-level course requirements, culminating in a *clinical certificate* in Oral Medicine (awarded jointly by Harvard School of Dental Medicine and Brigham and Women's Hospital) as well as a *master of medical sciences* (MMSc) degree from HSDM. There is no stipend support.

Certificate and Doctor of Medical Sciences

This is an intensive five-year tuition-bearing program (four years of tuition and a one-year facilities fee) that culminates in the awarding of both a *clinical certificate* in Oral Medicine (awarded jointly by Harvard School of Dental Medicine and Brigham and Women's Hospital) and a *doctoral of medical sciences* degree (DMSc) in Oral Biology (awarded by Harvard School of Dental Medicine). There is no stipend support; however, partial scholarship support may be available for highly qualified US residents.

Program Overview

The goal of the AGE program in Oral Medicine is to train future leaders in the field of Oral Medicine. Both tracks are uniquely organized such that students benefit from the rich academic and institutional resources of Harvard Medical School (HMS) and HSDM, while receiving all clinical training at Brigham and Women's Hospital and other HMS affiliated



institutions (Dana-Farber Cancer Institute, Massachusetts Eye and Ear Infirmary, etc). These are world class teaching and clinical institutions with academic and clinical environments that are well suited for training in the specialty of Oral Medicine. The wealth of educational and research opportunities in the Harvard medical community is unparalleled. The Harvard academic environment is largely dependent on self-motivation, self-learning, individuality, and drive for knowledge and exploration. Residents are expected to work hard, seek out opportunities, embrace challenges, and achieve at their highest possible level. While there is a considerable framework of organization, structure, and requirements, in large part it is what residents put in to the program, at every level (i.e. coursework, seminars, clinical rotations, research), that will define what they take away.

The clinical, educational, and research resources at BWH, HSDM, and the greater Harvard Medical School/Longwood Medical Area campus offer one of the richest and most unique environments for training in Oral Medicine. The Oral Medicine & Dentistry clinic at BWH manages a high volume of inpatients and outpatients with a wide range of oral medicine conditions, with a strong emphasis on oncology. All faculty members are board certified in Oral Medicine. All medical records are electronic and fully integrated into the Partners Healthcare System.

The following pages provide a detailed outline of both program tracks, including descriptions of the didactic, clinical, and research activities and requirements. **While a great deal of effort has been put into creating this resource, specific details may be subject to change, and any specific questions should be directed to the Program Director.**

ADMISSIONS

Candidates must possess a DMD, DDS, or equivalent degree (e.g., BDS). Completion of a hospital-based general practice residency (GPR) or equivalent is preferred. Applicants from countries in which English is not the primary language must provide an official Test of English as a Foreign Language (TOEFL) score report. Please visit the HSDM website for additional details including minimum TOEFL requirements.

Applications and Contact Information

Applications are due in mid-November and must be submitted through PASS (<https://portal.passweb.org/>). Please visit the HSDM website (<http://www.hsdm.harvard.edu/>) for additional details and required supplementary materials.

The admissions committee takes into account academic performance during dental school, personal statement, letters of recommendation, research experience, extracurricular activities, and prior postdoctoral clinical experience. Select candidates are invited for mandatory interview in November and December. The Oral Medicine programs in the United States have a common notification date for acceptances (mid-January), after which applicants have 48 hours to make a decision. Following this deadline, additional offers can be made if positions remain unfilled.

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GOALS & OBJECTIVES OF THE PROGRAM

1. Act as primary care providers for patients with orofacial, non-odontogenic diseases. This includes the diagnosis and management of patients with diseases that include, but are not confined to the following:
 - a. acute disease (eg. herpetic gingivostomatitis, erythema multiforme)
 - b. chronic mucosal disease (eg. vesiculo-bullous diseases)
 - c. salivary gland disease (eg. Sjögren syndrome, cGVHD, etc)
 - d. orofacial pain and neurosensory dysfunction conditions
 - e. oral manifestations of systemic diseases
 - f. oral infections
2. Act as a consultant for the dental and medical community. This may include the following:
 - a. treating patients with conditions as outlined above
 - b. performing dental evaluations in patients in preparation for organ transplantation and head and neck cancer therapy
 - c. managing cancer therapy-related oral complications
 - d. diagnosing and managing mucosal and odontogenic infections in medically complex patients
 - e. providing comprehensive oral health management consultations
3. Function competently, efficiently and effectively in the health care environment as a member of a multi-disciplinary health care team through participation in tumor boards, seminars, and teaching rounds during medical rotations.
4. Apply scientific principles to learning and patient care. This is obtained through critical thinking and self-directed, life-long learning, that includes:
 - a. reading and critically interpreting the scientific literature
 - b. use of information technology
 - c. making evidence-based decisions regarding patient care
 - d. becoming competent in the conduct of clinical research
5. Always behave ethically and professionally with students, colleagues and patients, and to always provide the best possible care.
6. Be engaged in community service and act as an ambassador for dentistry and the oral medicine specialty.



PROGRAM PROFICIENCIES

The educational program provides training to the level of proficiency for the following clinical skills:

1. Taking a history including the history of present illness, medical and surgical history, medication history, allergy history, and family and social history
2. Performing a medical risk assessment
3. Performing a comprehensive head and neck and oral examination for patients with, but not limited to:
 - a) oral mucosal diseases
 - b) salivary gland diseases
 - c) orofacial pain and neurosensory disorders
 - d) oral manifestations of systemic diseases
 - e) oral complications related to medical therapies, in particular in cancer patients
4. Establishing differential and working diagnoses
5. Performing diagnostic procedures (e.g. biopsies, cultures and cytology), and ordering tests for blood counts, serology and chemistry, and interpreting them
6. Selecting appropriate imaging studies and interpreting oral radiographic films
7. Interpreting radiographic reports for CT, MRI and PET scans
8. Developing and implementing a treatment plan for management of the patient
9. Evaluating the results of therapy including the occurrence and management of adverse events
10. Implementing a recall program appropriate for the disease
11. Communicating effectively and professionally with other health care providers
12. Keeping accurate patient records including all telephone and email communications
13. Performing off-site dental evaluations prior to hematopoietic stem cell transplantation
14. Performing clinical follow-up on patients in the hematopoietic stem cell program
15. Performing off-site dental evaluations prior to head and neck cancer therapy



PROGRAM DETAILS

Program Duration

The program begins mid-June with orientation. Residents in the certificate track complete the program in mid-June of the 3rd year. Residents in the Certificate/MMSc or Certificate/DMSc track complete the program in May of the 4th year and 5th year, respectively (at the time of Harvard graduation).

	Certificate	Certificate/MMSc	Certificate/DMSc
PGY-0	-	Didactics	Didactics
PGY-1	Clinics	Clinics	Clinics
PGY-2	Clinics	Clinics	Clinics
PGY-3	Clinics	Clinics	Clinics
PGY-4	-	-	Research

All residents enrolled in a degree program will begin as PGY-0 and complete the majority of the course work during the first year. Additional degree-specific components of the training (e.g. additional coursework, thesis level research) will be incorporated during PGY1 (equivalent to first year of clinical training and first year of training for the *Certificate only* track), PGY2 and PGY3. Clinical rotations will be completed during PGY1, PGY2 and PGY3. Residents in the DMSc track will complete and defend their thesis research during PGY4.

Program Costs

Certificate track

The Certificate only track is non-tuition bearing, but there is an associated annual HSDM facilities fee. Please visit the HSDM website for information on current fees for Advanced Graduate Education programs.

Certificate/MMSc track

The certificate/MMSc track is a four-year program (three years of tuition and a one-year facilities fee). Please visit the HSDM website for information on current fees/tuition for Advanced Graduate Education programs.

Certificate/DMSc track

The certificate/DMSc track is a five-year program (four years of tuition and a one-year facilities fee). Please visit the HSDM website for information on current fees/tuition for Advanced Graduate Education programs.

All residents

Every resident enrolled in a certificate, diploma or degree-granting program of higher education must participate in the Harvard University student health coverage. This is comprised of two different plans:

- 1) Student Health Fee (SHF) – basic coverage - approximately \$521 per semester



2) Student Health Insurance Plan (SHIP) – extended coverage – approximately \$1195 per semester

Note that the SHIP/extended coverage can be waived with proof of comparable coverage. The SHF/basic plan cannot be waived. The Harvard University Student Health Program website includes details regarding coverage and benefits. The link to the website is below.

<http://hushp.harvard.edu/student-health-fee>

Salary

Certificate track

Residents are paid according to the Partners Resident Salary Scale:

<http://www.partners.org/Graduate-Medical-Education/Current-Residents-And-Fellows/Benefits-Contract-Templates-Salary-Scale.aspx>

Certificate/MMSc

There is no salary support for this program track.

Certificate/DMSc

There is no salary support for this program track.

Required Reading

Reading is an essential component of the training program, and residents are expected to keep up with all assigned readings for courses and seminars, as well as self-directed reading.

Residents will be provided the following two books which must be read in full prior to beginning the program:

- Bruch, Jean M., Treister, Nathaniel S. *Clinical Oral Medicine and Pathology*. Humana Press, 2010
- Fisher, Dena J., Treister, Nathaniel S., Pinto, Andres. *Risk Assessment and Oral diagnostic in Clinical Dentistry*. Wiley-Blackwell

These books provide a strong basis on which to build oral medicine knowledge and to develop clinical skills.

Mandatory Progress Meetings with Program Director

Residents will meet every four months (October, February, May) with the Program Director to review their progress. Residents must complete a self-evaluation one week prior to the meeting.

Vacation Days



All vacation time must be used within a given academic year; vacation time cannot be accumulated or carried over to another academic year. The Oral Medicine and Dentistry clinic is closed on all official Brigham and Women's Hospital holidays. Residents are scheduled to take 24-hour emergency call on these holidays.

- (1) **Residents may not take two consecutive weeks of vacation time, and only one week may be taken during any three-month rotation block.**
- (2) **Vacation time may not be taken during the last week, or the first three weeks of the program.**
- (3) Vacation time is discouraged during off-service rotations that are only one to two weeks long.
- (4) **All vacation time should be scheduled at least ONE MONTH in advance using a vacation request form from the program coordinator. Please do not make any travel commitments or purchase any airline or other travel-related tickets until the request has been approved.**
- (5) Residents must notify the supervising attending by email if away with a 24 hour notice.

Certificate track

Residents are provided **12 days** of paid vacation/personal time per year, as follows:

- (6) Each resident is entitled to 10 working days of vacation, excluding Saturdays, Sundays and holidays.
- (7) Each resident is also entitled to 2 personal days, which may be used for interviews or any other purpose.

Certificate/MMSc track and Certificate/DMSc track

Per HSDM policy, AGE residents are permitted 20 days of vacation per academic year. Residents are generally granted Harvard University holidays; however on-call requirements may supersede the University holiday schedule. If a resident must work on a scheduled University holiday, a personal day may be taken at a time determined in conjunction with the Program Director. Time off must be requested at least one month in advance, and is subject to the approval of the Program Director.

Sick Leave and Leave of Absence

An illness of 12 consecutive days duration or greater, or individual sick days which total twelve days or greater, will require work time to be made up at the conclusion of the program. To avoid having to make up this time, sick days can be deducted from vacation days. In the event that an extended sick leave warrants a medical leave of absence, a formal request must be made to the Program Director and to the Committee on Advanced Graduate Education at the Harvard School of Dental Medicine. At the committee's discretion, a medical leave will be granted for a period of six months. Extension of this sick leave is at the discretion of the Program Director and the Committee.

Holidays

Holidays vary based on the specific institution at which the resident is currently studying and/or rotating:

HMS/HSDM Holidays

New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Christmas Day



BWH Holidays

New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Thanksgiving Day, Christmas Day

Certifications

It is the resident's responsibility to keep their CPR, ACLS certifications, and OSHA certification current and to provide copies of their certifications to the department administrator. Review courses are available. Residents must maintain an active **dental license** and provide the program coordinator with a copy. Foreign residents renew a Limited Dental License annually.

Certificate track

ACLS course is offered to new incoming residents during their initial orientation to the hospital. Residents must have a current CPR card, which needs to be renewed every two years. It is the resident responsibility to renew the CPR. OSHA certification is obtained during orientation and renewed in HealthStream on a yearly basis.

Certificate/MMSc track and Certificate/DMSc track

OSHA and ACLS/CPR courses are offered to residents during the initial orientation to HSDM. OSHA recertification is done on an annual basis, whereas CPR is every two years. Residents receive email reminders for renewal from HSDM. Classes renewal are held at HSDM.

Teaching Responsibilities

Teaching is a small but integral component of the residency program. Residents participate in the HSDM Objective Structured Clinical Examinations (OSCE) given to 3rd and 4th year predoctoral students. Residents teach HMS medical students proper examination of the oral cavity in the Introduction to Clinical Medicine course. Residents are involved in teaching HSDM students when on their Clinical Oral Medicine and Pathology rotations. Clinical consultations may also be provided at HSDM with faculty supervision.

Professional Activities

American Academy of Oral Medicine

All residents automatically become members of the American Academy of Oral Medicine upon matriculation and throughout their training.

Residents should subscribe to the Bulletin Board of Oral and Maxillofacial Pathology (BBOP), which is a very active listserv that discusses oral medicine and pathology related topics and events:

Send an email to the following address: listserv@listserv.acsu.buffalo.edu

When you get a reply; type in: subscribe bboplist (first name) (last name)



Board Examination

Residents are expected to take the certifying board examination prior to graduation. Part A (written) of the board examination can be taken in the spring of the second year (both tracks). A candidate for Part B Board certification must have engaged in the practice of the specialty of oral medicine for a minimum of eighteen (18) months after receiving the certificate in oral medicine before applying for the examination. The examination is offered at the annual AAOM meeting, typically held in the month of April. Please visit the AAOM website for additional information. A review course is offered at the AAOM annual meeting.

Residents taking Part B of the ABOM are eligible to apply to the Fellowship in Dental Surgery (conjoint examination in Oral Medicine) of The Royal College of Surgeons of Edinburgh. Please visit the RCSE website for additional information.

Conferences and Travel

From the second year of the program (and during the first if feasible for Certificate/MMSc track and Certificate/DMSc residents), students are expected to attend the American Academy of Oral Medicine (AAOM) annual meeting. This is an important venue for meeting other residents and post-doctoral students, as well as meeting leaders in the profession. The continuing education courses are also helpful in preparing for the board examination. Stipend support is provided to help supplement the costs of attending the meeting. The time spent at the meeting (or any other approved academic conference) is not considered vacation time.

Publications

The Program Director should be notified when an abstract or manuscript is submitted and/or when a decision has been received.

Contact Information

All students must have an email account at the dental school (@hsdm.harvard.edu) and check it daily. Once a Partners Outlook account has been established the Partners email address (@partners.org) must be checked regularly as this will be the primary mode of communication within the hospital. Emails should be replied in a timely manner, generally within 24 hours of receipt, or sooner, especially when clinical matters are involved.

Students must keep the department administrator updated with their current home and lab/day addresses, telephone and cell phone numbers.

Taking Call

Residents take primary call for the Oral Medicine & Dentistry consult service from 5pm to 5am. An attending is always on second call. See the On-Call section for more details.

Professional Activities



All residents attend a mandatory annual Professionalism course at BWH.

Complaint Policy

Residents have the right to file formal complaints with the Program Director as well as directly with the Commission on Dental Accreditation (CODA). Please visit the CODA website for more details.

RESIDENT RESPONSIBILITIES

The program is structured so that responsibility for organizing activities is delineated to the residents, allowing residents to develop administrative/organizational and leadership skills. Tasks are assigned in early April to allow sufficient time to prepare activities starting July/August.

Junior residents

The following responsibilities are delegated to residents in PGY2:

- Medicine Seminar Series scheduling and coordination (see page 25)
- Radiology and Internal Medicine quarterly review sessions scheduling and coordination (see page 25)
- Coordinate the monthly clinical review sessions and maintain patient log (see page 33):
 - **"A" Resident (resident on "A" rotation)** is responsible for completing the NI patient log for all inpatients (cardiac, tower patients...etc etc), ED consults and outpatient dental visits (initial and follow-up). **This also applies for the resident on-call.**
 - **"B" Resident** is responsible for completing the NI patient log for all pre-HSCT and pre-XRT dental evaluations. **"B" Resident is responsible for logging the Oral Medicine visits when there is no "C" resident.**
 - **"C" Resident** is responsible for completing the NI patient log for Oral Medicine outpatient visits (initial and follow-up) and uploading the clinical photos.

Chief resident(s)

Residents that are in their final year of clinical training may be selected to serve as Chief Resident(s). The resident will act as a liaison between the residents, the program coordinator and the Program Director. In addition the resident will assume important administrative roles including (but not necessarily limited to) the following:

- Resident clinical rotation scheduling (chief resident to review schedules with the Program Director and coordinator in May)
- HSDM oral medicine rotation scheduling (chief resident to send the C rotation schedule to Dr. Chia Li at the beginning of the AY. HSDM student will send an email to the C resident to confirm clinic and start time)
- On-Call scheduling



- Oral Medicine Seminar scheduling
- Oral Medicine Literature Review journal assignment and curriculum
- New resident orientation activities and lecture scheduling and coordination
- Oral Medicine Grand Rounds scheduling and coordination (see page 24)
- Orientation session with the 4th year HSDM student chosen for the elective rotation in Oral Medicine
- CE scheduling for the dental assistants

The chief resident(s) meet monthly with the Program Director. In addition to the progress meetings (every four months) with the Program Director, junior residents will meet individually with the chief resident(s) twice a year to review progress.



PROGRAM OVERVIEW

All residents complete the exact same clinical rotations during PGY1, PGY2 and PGY3. Clinical rotations are divided into consecutive three-month blocks. In addition to program specific conferences and seminars, formal required coursework is completed at HMS and HSDM as outlined below (see schedules below).

Rotation blocks

Rotation	# of blocks	Description
A	2	Consult service: consults (no BMT), outpatient clinic, secondary oral medicine
B	2	BMT service: AM rounds with BMT A, admit visits, off-site pre-BMT charts
C	3	Oral medicine: full-time oral medicine clinic
D1	1	Adult Hem/Onc; Dermatology; ENT
D2	1	Oncology, Imaging; Infectious Diseases, Pain, Headache; Research (4 wks)
D3	1	Pediatric Hematology Oncology; Rheumatology; Research (6 wks)
D4	1	Research
E	1	OMFS (4 wks), Electives (4 wks), research (4 wks)

This may be subject to changes

Clinic Schedule

		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Apr	May	Jun
Y	PGY1-A	A	A	A	B	B	B	E*	D1	D1	A	A	A
E	PGY1-B	E*	D1	D1	A	A	A	A	A	A	B	B	B
A	PGY2-A	C	C	C	D1	D2	D2	B	B	B	D4	D4	D4
R	PGY2-B	B	B	B	C	C	C	C	C	C	D1	D2	D2
1	PGY3-A	C	C	C	D2	D3	D3	C	C	C	D3	E	E
	PGY3-B	D2	D3	D3	C	C	C	D3	E	E	C	C	C
Y	PGY1-A	A	A	A	B	B	B	E*	D1	D1	A	A	A
E	PGY1-B	E*	D1	D1	A	A	A	A	A	A	B	B	B
A	PGY2-A	C	C	C	D1	D2	D2	B	B	B	D4	D4	D4
R	PGY2-B	B	B	B	C	C	C	C	C	C	D1	D2	D2
2	PGY3-A	C	C	C	D2	D3	D3	C	C	C	D3	E	E
	PGY3-B	D2	D3	D3	C	C	C	D3	E	E	C	C	C
Y	PGY1-A	A	A	A	B	B	B	E*	D1	D1	A	A	A
E	PGY1-B	E*	D1	D1	A	A	A	A	A	A	B	B	B
A	PGY2-A	C	C	C	D1	D2	D2	B	B	B	D4	D4	D4
R	PGY2-B	B	B	B	C	C	C	C	C	C	D1	D2	D2
3	PGY3-A	C	C	C	D2	D3	D3	C	C	C	D3	E	E
	PGY3-B	D2	D3	D3	C	C	C	D3	E	E	C	C	C

- During AAOM Annual Meeting, certificate only PGY1 covers inpatient service and emergency call

- PGY2 covers inpatient service when PGY1 in orientation and H&N Anatomy Course

* OMFS



COURSEWORK

Formal didactics are a cornerstone of the advanced graduate education program in Oral Medicine. Residents must receive a passing grade in every required course. Below is a summary of the course requirements, as well as program specific required courses. All coursework is expected to be completed during the first two years of study, with the majority of credits being completed by the end of the first year. Please refer to the **HSDM Student Handbook** for specific details on requirements and deadlines, including course registration, including cross-registration and adding and dropping courses. Questions should be directed to the Office of the Registrar at HSDM.

Required courses

TRACK		<i>Fall Semester (Sep – Dec)</i>	<i>Spring Semester (Jan – May)</i>
Certificate only	PGY1	H/N Anatomy (July, 2 wks, AM only) Biostatistics (Tues 1-3) Introduction to Research (Thurs 3-5) Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Foundations for the Advanced Dental Practitioner (some Fri 7.30-9.30) Precision Medicine and Oral Disease (1 st Wed 12-1)	Oral Med/Path (Mon 10-12) Hematology (April-May, W/F 8-10) Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Precision Medicine and Oral Disease (1 st Wed 12-1)
	PGY2	Intensive Review of Internal Medicine Course (July, 1 week) Oral Immunology (Mon 10-12) Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Precision Medicine and Oral Disease (1 st Wed 12-1)	Clinical Pharmacology (Tues 1-3) DFCI Clinical Oncology Seminar (Tues 7.15-9.15) Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Precision Medicine and Oral Disease (1 st Wed 12-1)
	PGY3	Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Precision Medicine and Oral Disease (1 st Wed 12-1)	Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Precision Medicine and Oral Disease (1 st Wed 12-1)
Certificate/MMSc & Certificate/DMSc		<i>Fall Semester (Sep – Dec)</i>	<i>Spring Semester (Jan – May)</i>
	PGY0	H/N Anatomy (July, 2 wks, AM only) Biostatistics (Tues 1-3) Introduction to Research (Thurs 3-5) Oral immunology (Mon 10-12) Foundations for the Advanced Dental Practitioner (some Fri 7.30-9.30) Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Oral microbiology (Mon 8-10)* Human pathology (T/TH 8-12)* Precision Medicine and Oral Disease (1 st Wed 12-1)	Oral Med/Path (Mon 10-12) Hematology (April-May, W/F 8-10) Clinical pharmacology (Tue 1-3) Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) AGE Research Seminar Series Craniofacial dev and gen. (Mon 8-10)* Precision Medicine and Oral Disease (1 st Wed 12-1)
	PGY1	Oral Medicine Seminar (2 nd and 4 th Wed 9-12)	DFCI Clinical Oncology Seminar (Tues 7.15-9.15)



	Oral Medicine Literature Review (3 rd 9-11) American Board of Oral Medicine Exam Preparation (3 rd Wed 11-12) Precision Medicine and Oral Disease (1 st Wed 12-1)	Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) AGE Research Seminar Series Precision Medicine and Oral Disease (1 st Wed 12-1)
PGY2	Intensive Review of Internal Medicine Course (July, 1 week) Oral Medicine Seminar (2 nd and 4 th Wed 9-12) Oral Medicine Literature Review (3 rd 9-11) American Board of Oral Medicine Exam Preparation (3 rd Wed 11-12) Precision Medicine and Oral Disease (1 st Wed 12-1)	Oral Medicine Seminar (2 nd and 4 th Wed 1-4) Oral Medicine Literature Review (3 rd Wed 1-3) American Board of Oral Medicine Exam Preparation (3 rd Wed 3-4) Precision Medicine and Oral Disease (1 st Wed 12-1)
PGY3	Precision Medicine and Oral Disease (1 st Wed 12-1)	AGE Research Seminar Series Precision Medicine and Oral Disease (1 st Wed 12-1)
PGY4*	Precision Medicine and Oral Disease (1 st Wed 12-1)	AGE Research Seminar Series Precision Medicine and Oral Disease (1 st Wed 12-1)

*DMSc only

Course requirements for combined Certificate/Degree tracks

	Certificate/MMSc	Certificate/DMSc
Minimum # of Credits	20	32
HSDM Core Courses	12 credits (minimum)	12 credits (minimum)
Graduate level Basic Science courses taken at HMS, HSPH, MIT, FAS	4 credits (minimum)	12 credits (minimum)

The non-HSDM courses listed below have been approved for fulfillment of the Certificate/Degree requirements and are highly recommended based on the curriculum and relevance to the Oral Medicine program. Courses that are not listed below must be approved by the Program Director and registrar prior to enrollment.

When cross-registering for courses, credits transfer as follows:

- HMS > HSDM 1:1
- HSPH > HSDM 2.5:2
- MIT > HSDM Varies, check with registrar’s office

Approved courses

Those courses *italicized* below are first year core courses for the Biological and Biomedical Sciences (BBS) PhD program and are excellent, comprehensive, in-depth graduate (doctoral) level courses. For more details please refer to the HMS Course Catalog (<http://www.medcatalog.harvard.edu>).



Course Listing	Title	Semester	Credits
HMS BP715.0	Molecular Approaches to Drug Action Discovery and Design	Spring	4
<i>HMS BP723</i>	<i>Molecular Biology</i>	Fall	4
<i>HMS GN 701.0</i>	<i>Principles of Genetics</i>	Fall	4
<i>HMS CB 713.0</i>	<i>Molecular Biology of the Cell</i>	Spring	4
HMS CB704.0	Molecular and Systems Level Cancer Cell Biology	Fall	4
HMS HT140	Molecular Medicine	Fall	2
HMS HT030	Human Pathology	Fall	4
HMS HT080	Hematology	Spring	2
HMS HT175.0	Cellular and Molecular Immunology	Fall	4
<i>HMS IM702.0</i>	<i>Principles of Immunology</i>	Fall	4
HMS ME732	Fundamental Methods of Clinical Trials	Spring	3
HT572.0	Future Medical Technologies	Spring	1
MIT HST594	Translational Medicine Seminar	Fall/Spring	
MIT BIO 7.95	Cancer Biology	Spring	
SPH EPI249	Molecular Biology for Epidemiologists	Fall	2.5
SPH EPI250	Molecular Epidemiology of Cancer	Fall	1.25
SPH IMI208	Immunology of Infectious Diseases	Spring	5
SPH NUT202	Science of Human Nutrition	Spring	5

SEMINARS

Oral Medicine Core Lectures

A series of introductory lectures is given during orientation.

Lectures include: differential diagnosis for the most common oral mucosal conditions; management of common dental emergencies; principles of pathology and histopathological interpretation; common mucosal conditions; leukoplakia, dysplasia and oral cancer; common oral medicine therapeutics; introduction to oncology; hematopoietic cell transplantation and the dentist; dental management of head and neck cancer patients; mucositis; and oral complications in cancer survivors.

Oral Medicine Seminar (OM601)



Seminars are the second and fourth Wednesday of each month, from 1:00 pm to 4:00 pm, at One Brigham Circle, 3rd floor conference room. Once a month, there will be also a one-hour lecture given by an invited speaker. The seminar series includes in-depth review of core oral medicine curriculum, Top 50 prescribed medications, case reviews, and critical analysis of the literature. The annual schedule (based on a 36-month curriculum) is prepared by the chief resident(s) in consultation with the Course Director and finalized in the early summer. Advanced reading of assigned articles and preparation of formal, professional Power Point presentations (when presenting a topic for the session) are mandatory.

In addition to preparing the curriculum, the chief resident is responsible for assigning presentations, medications as well as maintaining the **Oral Medicine Seminar** conference in the Harvard eCommons Online Storage share drive.

Within one week of the seminar, one multiple choice (with answers a-e) or short answer question based on the seminar topic(s) must be written. Each question must be followed by a concise but sufficiently detailed explanation of the correct answer (and in the case of multiple choice why the other answers are incorrect), with supporting references. Fundamental principles should be emphasized. The word document must be emailed to the Course Director. The finalized assignments are then sent to the chief resident who is responsible for maintaining a master file in the seminar folder.

Seminar presenter responsibilities:

- 1) Upload pertinent scientific articles for the seminar topic. Preference should be given to randomized controlled trials and “key articles”. Articles should be uploaded to eCommons no later than 5 pm Friday prior to the seminar.
- 2) Update the Top 50 most prescribed medications table according to the schedule provided by the chief resident, using the following format:

	Name	Dosage	Clinical indications	Pharmacology/ mechanism of action	Pharmacokinetics	Interactions	Contraindications	Side effects	Oral features
1	Generic name (Brand name)								

- 3) Include the most frequently prescribed medications pertinent to the presentation topic (even if the medications are NOT included in the 50 most prescribed medications) in the Power Point presentation.

Attendance at all seminars is mandatory. Certificate/MMSc and Certificate/DMSc residents in their last year of training do not attend seminar and are expected to use this time for research. Any potential conflicts must be discussed with the Course Director. At the end of the session, each resident will be evaluated according to a four-point scale (see below) for the following:

- Participation: residents are evaluated on a four-point scale according to the substance and quality of their contribution to the discussion of assigned readings.
- Assignments: residents are evaluated according to the quality and originality of the submitted multiple choice or short answer question.
- Presentation: the presenting resident is evaluated according to the organization, clarity, quality, and content of the seminar presentation.



Presentation was well organized and at the appropriate knowledge level
Information was clearly presented in logical manner
Key points were identified and explained in detail
Pace of the presentation was appropriate
Anticipated learning objectives were met by this presentation
Presentation supported by appropriate number of most current literature

Four-point evaluation scale: 1 – unsatisfactory; 2 – below expectations; 3 – meets expectations; 4 – exceeds expectations

Required readings (to be read during orientation week)

1. Baccaglini L, Shuster JJ, Cheng J, Theriaque DW, Schoenbach VJ, Tomar SL, Poole C. Design and statistical analysis of oral medicine studies: common pitfalls. *Oral Dis.* 2010 Apr;16(3):233-41
2. Royce TJ, Hendrix LH, Stokes WA, Allen IM, Chen RC. Cancer screening rates in individuals with different life expectancies. *JAMA Intern Med.* 2014 Oct 1;174(10):1558-65
3. Pearson TA, Manolio TA. How to interpret a genome-wide association study. *JAMA.* 2008 Mar 19;299(11):1335-44.
4. BMJ series “How to read a paper” <http://www.bmj.com/about-bmj/resources-readers/publications/how-read-paper>



Oral Medicine Seminar Curriculum (3 year curriculum)

Year A	Year B	Year C
1. Introduction to clinical oral medicine	1. Introduction to clinical oral medicine	1. Introduction to clinical oral medicine
2. Clinical research, study design/phases, IRB, FDA approval	2. Pigmented lesions (1): Oral lesions	2. Genomics, Personalized Medicine and Oral Disease
3. Hematology/Oncology (1): Leukemia	3. Pigmented lesions (2): Associated disorders	3. Cancer treatment complications (1): short-term
4. Hematology/Oncology (2): Lymphoma	4. Salivary gland disease (1): SG anatomy/physiology, saliva, diagnostics	4. Cancer treatment complications 2: long-term
5. Hematology/Oncology (3): Stem cell transplantation	5. Salivary gland disease (2): Neoplasia	5. HIV
6. Hematology/Oncology (4): GVHD	6. Salivary gland disease (3): Infections, inflammatory conditions	6. Antibiotics/antimicrobials
7. Hematology/Oncology (5): Solid tumors post-SCT	7. Cases review	7. Cases review
8. Cases review	8. Autoimmune (1): SLE, Sjögren syndrome, RA, etc.	8. Complementary and Alternative medicine
9. Cardiovascular disease	9. Autoimmune (2): Therapies (immunosuppressive, biologicals)	9. Endocrine (1): Diabetes mellitus
10. Hematology (1): Bleeding disorders	10. Solid organ transplantation	10. Endocrine (2): Thyroid, parathyroid and pituitary disorders
11. Hematology (2): Hemoglobinopathies	11. Cases review	11. Cases review
12. Cases review	12. Odontogenic cysts and tumors	12. Pain (1): Review of anatomy and pathways, clinical features, patient assessment
13. CNS and psychiatric disorders	13. Fibro-osseous lesions (benign/malignant)	13. Pain (2): TMJ/TMD
14. Odontogenic infections	14. Leukoplakia, PVL and other potentially malignant lesions	14. Pain (3): Neuropathic
15. Antiresorptive therapy in cancer	15. Cases review	15. Pain (4): Headaches
16. Cases review	16. Liver diseases	16. Cases review
17. Vesiculobullous and ulcerative (1): RAS, LP, Bechet	17. Renal/Adrenal diseases	17. Taste and smell disorders
18. Vesiculobullous and ulcerative (2): PV, BP, MMP, paraneoplastic	18. Cancer (1): Cancer biology (introduction to the cancer problem)	18. Fungal infections
19. Vesiculobullous and ulcerative (3): EM, SJS, TEN	19. Cancer (2): Common adult/pediatric cancers	19. Viral infections (1): Herpes simplex virus 1/2
20. Granulomatous diseases (1): OFG, IBD, vasculitis	20. Cancer (3): Treatment of cancer	20. Viral infection (2): all others
21. Granulomatous diseases (2): sarcoidosis, TB, cat scratch, leprosy, syphilis	21. Cancer (4): Head and neck SCC	21. Principles of nutrition (with emphasis on oral health and orofacial diseases)
22. Cases review	22. Cases review	22. Case review



Oral Medicine Literature Review

Literature review sessions are the third Wednesday of each month (1:00 pm - 3:00 pm), at One Brigham Circle, 3rd floor conference room. The scope of these sessions is to keep residents up to date with the current literature, and to learn how to critically read/review scientific papers.

Each session is divided into two sections:

1. Journal updates and critical analysis of the literature. Based on an annual syllabus, each resident is assigned a list of journals to review. Residents are expected to identify 3-4 articles to present from their assigned journals. Each resident will send their journals' tables of contents and the list of articles for presentation to the Course Director no more than one week prior to the scheduled session. Following approval, the articles are uploaded to *eCommons* (no later than 5 pm, on Fridays) prior to the seminar.

Journals reviewed: American Journal of Transplantation, Biology of Blood Marrow Transplantation, Blood, Bone Marrow Transplantation, Head and Neck, Journal of Clinical Oncology, Journal of Oral Pathology and Medicine, Journal of the American Dental Association, Journal of the American Medical Association, Lancet Oncology, New England Journal of Medicine, Oral Diseases, OOOO, Oral Oncology, and Journal of Oral and Maxillofacial Surgery, JAMA Dermatology, Journal of Oral and Facial Pain and Headache.

2. Manuscript reviewing exercise: The purpose of this exercise is to expose residents to the formal review process for manuscripts submitted for publication in peer-reviewed journals. The Course Director will circulate a manuscript to the residents to analyze and review, one week prior to seminar. Residents are expected to read the article critically, write a formal review, and determine the following: *accept*, *accept with minor revisions*, *accept with major revisions*, or *reject*. The manuscript will be also discussed as a group.

The annual journal assignment and curriculum is prepared by the chief resident(s) in consultation with the Course Director and finalized in the early summer. In addition, the chief resident is responsible for maintaining the **Oral Medicine Literature Review** folder in the Harvard *eCommons* Online Storage share drive. At the end of the session, each resident will be evaluated for:

- Participation (50%): Active learning is essential. Residents will participate at all sessions and assigned a list of journals to review. Residents are expected to identify 3-4 articles to present from their assigned journals and these will be discussed within each session. Classroom participation will be graded for quality of contribution to the topic, quantity of contribution, and the professionalism of the response.

A scale from 1-4 will be used for evaluation (1 – unsatisfactory; 2 – below expectations; 3 – meets expectations; 4 – exceeds expectations).

- Knowledge base (30%): Residents will be graded for the quality and quantity of knowledge and level of evidence.

A scale from 1-4 will be used for evaluation (1 –unsatisfactory; 2 – below expectations; 3 – meets expectations; 4 – exceeds expectations).



- Attendance (20%): Attendance at all sessions is mandatory. Attendance is graded as part of the overall evaluation. Incomplete attendance makes it impossible to receive an "Honors" grade. Any potential conflicts must be discussed in advance with the Course Director.

Required reading

The following is a list of required readings for residents to read during the first month of the residency program. A copy of the reading material will be available in *eCommons* shared drive.

1. JAMA series: A user's guide to the medical literature. Articles I-XV. 1993
2. Linden A, Roberts N. A user's guide to the disease management literature: recommendations for reporting and assessing program outcomes. *Am J Manag Care*. 2005 Feb;11(2):113-20.
3. Foucar E, Wick MR. An observational examination of the literature in diagnostic anatomic pathology. *Semin Diagn Pathol*. 2005 May;22(2):126-38.
4. Riegelman RK, Hirsch RP: Studying a study and testing a test: How to read the health science literature (Third edition. Boston: Little, Brown and Co., 1996.
5. Bhattacharya S, Miller J, Ropper AH. The case for case reports. *Ann Neurol*. 2014 Oct;76(4):484-6.
6. Macrina FL: Science integrity. Washington, DC: American Society for Microbiology, 1995.
7. Norman GR, Streiner DL: Biostatistics: the bare essentials. St. Louis, Mosby Year Book, Inc., 1994.
8. Williams JM: Style: Ten lessons in clarity and grace, Fifth edition. New York, Addison Wesley Longman, Inc., 1996.
9. Thomas C. Foster: How to Read Literature Like a Professor: A Lively and Entertaining Guide to Reading Between the Lines. Harper Perennial, Revised edition, 2014.

American Board of Oral Medicine (ABOM) Exam Preparation

The American Board of Oral Medicine (ABOM) exam preparation sessions are on the third Wednesday of each month, from 3:00 pm to 4:00 pm at One Brigham Circle, 3rd floor conference room. The scope of these sessions is to prepare residents for the American Board of Oral Medicine (ABOM) exam (<http://www.aom.com/board-certification>).

The purpose of this exercise is to provide residents with a case discussion to gain experience in the content or process used in the board examination. In addition, this will help to prepare and familiarize residents with the board exam. The board exam is divided into two parts (Part A/written; Part B/oral) that cover seven sections:

- a. Oral Diseases/Conditions and Salivary gland disease
- b. Oral Pathology
- c. Oral Radiology
- d. Medically Complex Dental Patients
- e. Laboratory medicine
- f. Pharmacology
- g. Orofacial pain



At each session, the Course Director will prepare a case scenario based on one section of the board. The primary outcome assessment will be passing annual oral exam conducted for the residents in the division. At the end of the session, each resident will be evaluated according to a four-point scale (see below) for the following:

- Participation (50%): Active learning is essential. All residents are expected to participate in the case discussion. Classroom participation will be graded for quality of contribution to the case, quantity of contribution, and the professionalism of the response.
- Knowledge base (30%): Residents will be graded for the quality and quantity of knowledge and level of evidence.
- Attendance (20%): Attendance at all sessions is mandatory. Attendance is graded as part of the overall evaluation. Incomplete attendance makes it impossible to receive an "Honors" grade. Any potential conflicts must be discussed in advance with the Course Director.

Four-point evaluation scale: 1 – unsatisfactory; 2 – below expectations; 3 – meets expectations; 4 – exceeds expectations.



Oral Medicine Grand Rounds

Oral Medicine Grand Rounds meets the first Wednesday of every month from 11-12 am. Attendance and regular presentations throughout the program are mandatory. Presentations should include adequate background and introduction, concise presentation of the case, including all pertinent laboratory, histopathology and radiology studies, and a review of the literature. Two cases are presented, with each taking approximately 30 minutes. All presentations are archived in a folder entitled **Oral Medicine Grand Rounds** in eCommons online storage.

The chief resident (s) is responsible for coordinating the Oral Medicine Grand Rounds schedule for the year according to the schedule template. Presentations will be divided among Oral Medicine and Oral Pathology residents. A list of potential cases is available under the **Patient Log**. A schedule template is available in the eCommons folder and the schedule is finalized each June. It is responsibility of the presenter to identify a case **two weeks prior** to each session and discuss it with a Faculty member prior the presentation.

It is the organizing resident’s responsibility to 1) maintain the Oral Medicine Grand Rounds Excel spreadsheet log (by contacting each individual presenter for date, MRN of the case, and diagnosis), 2) create a new folder in eCommons for each session (Year-Month-Day), 3) ensure that the presenters upload their PowerPoint presentations to the folder, and 4) maintain a database of suggested cases to be presented approved by the oral medicine faculty.

Attendance is mandatory. Any potential conflicts must be discussed with the Program Director. At the end of the session, each presenting resident is evaluated according to the organization, clarity, quality, and content of the seminar presentation according to a four-point scale (see below).

Presentation was well organized and at the appropriate knowledge level
Information was clearly presented in logical manner
Key points were identified and explained in detail
Pace of the presentation was appropriate
Anticipated learning objectives were met by this presentation
Presentation supported by appropriate number of most current literature

Four-point evaluation scale: 1 – unsatisfactory; 2 – below expectations; 3 – meets expectations; 4 – exceeds expectations

Oral Pathology Review Sessions (OP602.23PS -Surgical Oral and Maxillofacial Pathology)

A strong understanding of pathology and familiarity with histopathological interpretation is essential for the practice of oral medicine. Oral pathology review sessions are twice a month (1st and 3rd Tuesdays of every month- 5:15-6:15 pm)

This bi-monthly surgical oral pathology conference is designed to train oral medicine residents in the diagnosis of characteristic and common oral pathologic conditions. Participants will be provided in advance with limited clinical histories and microscopic slides and students will prepare written descriptions and differential diagnoses in advance for discussion. At each session, students will offer their interpretations and receive feedback from one another and from



the instructor. The objective of this course is to train students to become competent in the microscopic diagnosis of characteristic and common oral pathologic conditions that they will be expected to encounter routinely in clinical practice. A practical examination will be administered at the end of each semester in which residents will be expected to demonstrate diagnostic competence and progression throughout each year of training.

Head and Neck Radiology Seminar Series

An intensive series of seminars on the principles of head and neck radiology are given during the summer of the first year. Seminar topics include: Review of x-ray production; Digital radiography; Cone beam and medical CT; Other imaging modalities (e.g. MRI, fMRI, Nuclear medicine); and Basic concepts of interpretation.

There will also be quarterly case review sessions held by Dr. Bernard Friedland at HDSM. These sessions will focus on the recognition of imaging features of various developmental, odontogenic and non-odontogenic maxillofacial lesions, evaluation of emergent head and neck pathology and maxillofacial radiological interpretation.

Internal Medicine Series

The internal medicine series aims to strengthen trainee's training in the fundamentals of Internal Medicine history taking, bedside physical examination, and note writing. Through didactic sessions and case based learning, residents improve their ability to:

- Identify and interpret important components of the medical patient's history and physical exam
- Understand reasons for ordering and interpretation of commonly ordered labs in medical patients
- Recognize patterns to distinguish severity of common medical conditions for which oral medicine is frequently consulted

Residents meet with Internal Medicine clinician-educators for several half day immersions sessions in the first half of the year that focus on the skills needed to interpret medical admission notes and progress notes, using interactive exercises aimed at applying the information to clinically relevant situations.

In the second half of the year, review sessions provide time for guided case based interpretation of internal medicine cases that residents are likely to encounter during their clinical rotations. Trainees bring in notes from cases they've been involved with, and have the opportunity to review cases, clarify points of confusion, and discuss medical issues encountered. These sessions focus on improving trainees ability to effectively communicate about and manage the oral care of medically complex patients.

Residents will also participate in a series of Clinical Pathology didactic sessions. These sessions are run by the Clinical Pathology resident and cover hematology, chemistry, microbiology and blood bank, enabling trainees to gain a deeper understanding of the laboratory medicine involved in the care of their patients.

Intensive Review of Internal Medicine Course

HMS/BWH CE course, 1 week, July, PGY2



The Intensive Review of Internal Medicine Course is designed to enhance internal medicine knowledge by offering a comprehensive update (internal medicine & its subspecialties); a case-based review of challenging clinical problems and review of literature to guide evidence based practice and serve to prepare attendees for the ABIM Board Examinations (for Certification and Recertification). Many outstanding clinicians/teachers have been chosen as course instructors. Throughout the course, emphasis will be made on the practical application of physiological principals to the understanding and management of clinical problems for both clinical practice and board exam preparation. By updating practicing physicians/internists and trainees on ever changing medical guidelines and therapeutic strategies, this course will serve not only to bridge the gap related to lack of knowledge for certification and recertification, but is also designed to improve physician competence in the patient care setting where current/updated knowledge is applied.

BWH Introduction to Clinical Research Course

The Center for Clinical Investigation offers this intensive two day course of lectures and small breakout group discussions that covers the fundamentals of clinical research for junior faculty, advanced residents, fellows and postdocs who would like to be better prepared to design and conduct their own research at BWH. This is a unique opportunity to learn from and meet with experienced clinical researchers at BWH who will provide you with the tools and resources to facilitate your research at this institution. Breakfast refreshments and lunch will be provided both days.

Topics include: Study Design, Data Analysis, IRB, Research Integrity, Publishing, Grant Writing

Upon completion of this activity, participants will be able to:

- 1) Understand the correct conduct and practices of clinical research, as well as comply with new policies, practices, etc.
- 2) Recognize the various roles and responsibilities of the research team in the conduct of clinical research.
- 3) Identify the clinical research resources available within the hospital and greater research community.

Graduate Seminar in Precision Medicine and Oral Disease

This is a yearlong course which meets for one hour on the first Wednesday of each month during the academic year (September to May). Participation is typically limited to individuals who have matriculated to the any of the advanced education (residencies) tracks in Oral Medicine offered by Brigham and Women's Hospital and the Harvard School of Dental Medicine. Graduate students or residents in other programs may enroll in the course depending on space availability and at the discretion of the course director. The objective of the course is to introduce basic and translational concepts in precision medicine as applied to oral diseases and/or systemic diseases with oral manifestations. While a text is not required, *Genomics, Personalized Medicine and Oral Diseases* (Springer 2015) can be used as a source. Suggested readings will be provided by the course director in advance of each meeting with the expectation that each will be reviewed by participants.

Attendance is required.

Course Content (subject to modification)

1. Introduction to Precision Medicine and review of fundamentals of genetics and genomics
2. The oral microbiome and its relationship to genomics and oral disease
3. Periodontal disease
4. Aphthous stomatitis and Behcet's disease



5. Blistering diseases including lichen planus
6. Pre-malignant lesions and oral cancer
7. Salivary gland diseases
8. Gene therapy
9. Translational approaches and challenges

Assessment

Students will receive a pass/fail assessment based on preparedness and seminar participation.



PROGRESS EXAMS

Written examination

A comprehensive **written examination** will be administered twice a year (February and June). Questions will be based primarily on the *Oral Medicine Seminar* and *Oral Medicine Literature Review* topics that were reviewed during the preceding 6 month period. Questions will be both case based (short answer) and multiple choice formats; most of the questions will be taken from the questions submitted for *Oral Medicine Seminar* (which are available for review in ecommons). Last year Certificate/MMSc and Certificate/DMSc residents are exempt from this exam.

Annual oral qualifying examination

The **annual oral qualifying examination** occurs in early June of each year. The examination is conducted by the oral medicine faculty, in group format. The purpose of this examination is to assess the resident's overall knowledge base, progress, and communication skills, and to help prepare for the American Board of Oral Medicine board examination.

For both the written and oral examinations, a minimum passing score of 70% is required to complete the program requirements. Those failing to achieve a passing grade will take a makeup test.



RESEARCH REQUIREMENTS

Advances in the field of Oral Medicine depend on well-planned, designed, and executed research. Residents gain introductory experience in research through coursework and seminars, as well as through practical experiences. The Division of Oral Medicine and Dentistry maintains an active and robust agenda of clinical and translational research, providing ample opportunities for resident projects.

Residents must complete the Human Subject Protection Training Requirements through the University of Miami Collaborative IRB Training Initiative (CITI Course) by the end of their first year of training. This is an online, mandatory training that is required to participate in any research involving human subjects (including retrospective chart based research). Create a new account (institution is Brigham and Women's Hospital) and complete the "CITI Basic Course".

<https://www.citiprogram.org/>

Certificate only requirements

Residents are expected to complete TWO of the following research activities:

1. Case report to be submitted for presentation at the AAOM annual meeting, ideally during PGY2 (abstract submission deadline is mid-December).
2. Write a review paper or a chapter as the primary author.
3. Conduct an original research project. It is expected that the results will be presented as an abstract at a scientific meeting and subsequently published in a peer-reviewed journal.

Certificate/MMSc requirements

Residents are expected to complete TWO of the following research activities:

1. Case report to be submitted for presentation at the AAOM annual meeting, ideally during PGY1 (abstract submission deadline is mid-December).
2. Write a review paper or a chapter as the primary author.
3. Conduct an original research project. It is expected that the results will be presented as an abstract at a scientific meeting and subsequently published in a peer-reviewed journal.

Certificate/DMSc requirements

In addition to the required thesis research project, Certificate/DMSc residents are encouraged to complete one of the above described research activities

Please refer to the **HSDM Student Handbook** and the Office of Research webpage at the HSDM website (www.hsdm.harvard.edu) for details on the Certificate/DMSc (or other relevant) research requirements and deadlines. All research related questions should be initially directed to the Office of Research.

It is highly recommended that residents complete 1-2 laboratory rotations during the first year prior to identifying their thesis laboratory and mentor. A research laboratory and thesis project should be determined by the end of the first year



or early during the second year. In addition to exposure to research faculty during courses/seminars, and the resources available through the Office of Research at HSDM, here are a few Harvard websites that are of use in identifying potential research laboratories and mentors:

Harvard School of Dental Medicine *DMSc Research Guidebook*:

http://www.hsdm.harvard.edu/depts/research/pdf-files/DMScResearch_Guide.pdf

Harvard Medical School Division of Medical Sciences Faculty:

<http://www.hms.harvard.edu/dms/faculty.html>

The Harvard Catalyst:

<http://connects.catalyst.harvard.edu/PROFILES/SearchProfiles.aspx>

Research at Dana-Farber Cancer Institute:

<http://www.dana-farber.org/res/>



Research timeline

TRACK	PGY0	PGY1	PGY2	PGY3	PGY4
Certificate track only		<ul style="list-style-type: none"> Explore and identify a research project and a mentor Submit two-page proposal Begin research project 	<ul style="list-style-type: none"> Continue on approved research project 	<ul style="list-style-type: none"> Complete research project, publish results 	
Certificate/MMSc	<ul style="list-style-type: none"> Identify research mentor and project and begin research Submit NIH-formatted proposal and complete NIH-formatted proposal examination 	<ul style="list-style-type: none"> Submit NIH-Formatted Research Proposal 	<ul style="list-style-type: none"> Continue on approved research project 	<ul style="list-style-type: none"> Complete research project, publish results Present research in IDP800.IN Advanced Graduate Education Research Seminar Series Submit/present abstract at Student Research Day 	
Certificate/DMSc	<ul style="list-style-type: none"> Identify research mentor and project and begin research Submit NIH-formatted proposal and complete NIH-formatted proposal examination 	<ul style="list-style-type: none"> Submit NIH-Formatted Research Proposal Complete Oral Qualifying Exam 	<ul style="list-style-type: none"> Continue on approved research project 	<ul style="list-style-type: none"> Continue research Convene Thesis Advisory Committee 	<ul style="list-style-type: none"> Complete research project Convene Thesis Advisory Committee mid to late fall Convene Thesis Defense Committee Submit/present abstract at Student Research Day Submit/defend thesis



Research project proposal format

Background and Significance

Describe the significance of the research, and provide the rationale for choosing the project. This section should also contain a thorough and critical evaluation of the relevant literature. This review should progress from the historical background to current knowledge and should acknowledge the various controversies and unanswered problems.

Hypothesis and aims

The hypothesis should be formulated in a single sentence indicating what is known in the field and stating how the knowledge could be advanced or refined by this research. After the hypothesis, list the research aims to explain the hypothesis. Describe each aim in one to three sentences.

Study plan

This section should include a general description of the study plan. This is followed by a description of the methods to be used and the analysis plan. It should be clear how the desired goal is going to be achieved given these methods and procedures.

References

The references format should follow the New England Journal of Medicine. It is expected that a referencing application such as Endnote™, or any other similar application will be used for managing references.



CLINICAL CLERKSHIPS

The clinical clerkships begin in July of the first year for the certificate track and in June of the second year for the Certificate/MMSc track and Certificate/DMSc track (following completion of the spring semester courses). On-call coverage may begin in June. Please see the program grid for more details.

Clinical rotations include training in oral medicine as well as various related medical specialties. There are both core and off-service clerkships, described below. Sufficient time is made available for coursework, seminars, and research.

The New Innovations *Patient Encounter Log* must be maintained, and evaluations must be completed via New Innovations following completion of each rotation.

- All clinical rotations are at Brigham and Women's Hospital (BWH) unless otherwise specified
- A white coat and photo ID must be worn during all clinical rotations
- **The New Innovations *Patient Encounter Log* must be maintained on each rotation**
- Evaluations must be completed in New Innovations following completion of each clinical rotation
- Dress is professional, unless on a surgical rotation where hospital scrubs are standard
- A head light is provided for inpatients consultations



New innovation (NI) patient log

“A” Resident (resident on “A” rotation) Resident A is responsible for completing the NI patient log for all inpatients (cardiac, tower patients...etc etc), ED consults and outpatient dental visits (initial and follow-up). **This also applies for the resident on-call.**

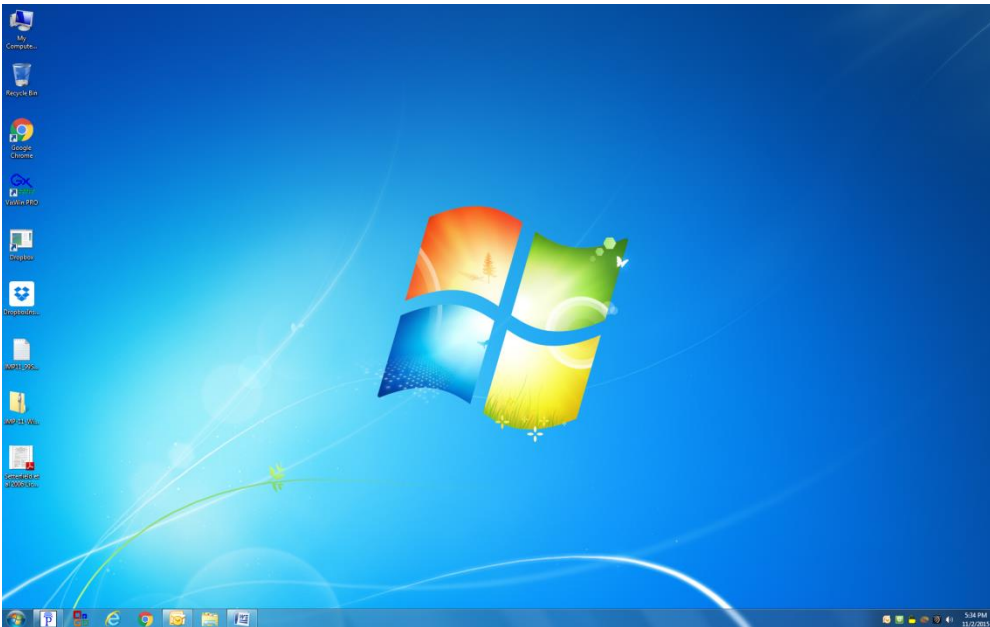
“B” Resident is responsible for completing the NI patient log for all pre-HSCT and pre-XRT dental evaluations. **“B” Resident is responsible for logging the Oral Medicine visits when there is no “C” resident.**

“C” Resident is responsible for completing the NI patient log for Oral Medicine outpatient visits (initial and follow-up).

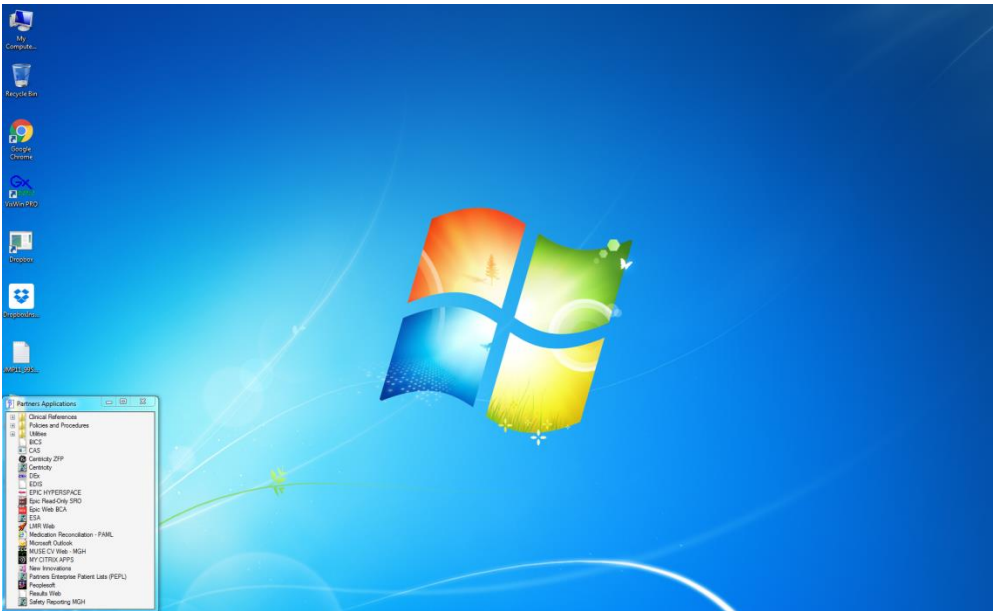
Patient encounters during “D” rotations are also included in the NI patient log.

Instructions:

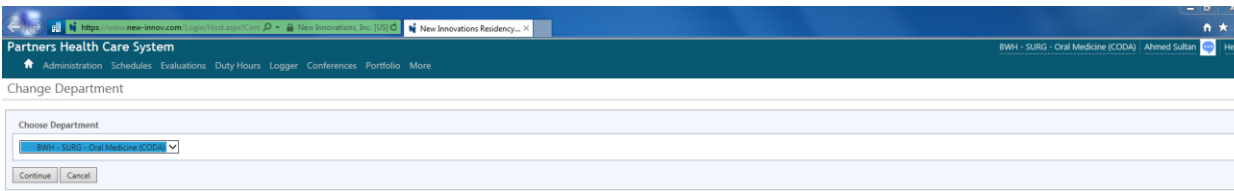
Select the “Partners Application” icon on the lower left panel.



Select the “New Innovations” icon.



Click continue on “BWH-SURG-Oral Medicine (CODA)”.



Select “Logger”.



Select “Procedures”.



The patient log screen will be displayed as below.

Status: Department:

Patient ID: *Last Name: *First Name:

*Date of Birth:

Procedures/Diagnoses

* Date Performed: Location:

* Procedure:

Supervisor:

Group:

* Diagnosis:

[+ Add Diagnosis](#)

Examined By: Diagnosis Detail:

* Patient Encounter Type:

Presentation:

* Cancer-Related?: No Yes

* Session:

[+ Add Procedure](#)

Comments:

Remaining Characters: 3,500

[View Log Listing](#)



Enter the patient's BWH MRN into "Patient ID" and enter the patient's D.O.B. and name.

Status: Department:

— Patient —

*Patient ID: *Last Name: *First Name:

*Date of Birth:

— Procedures/Diagnoses —

Input the date of the visit into "Date Performed" and the location into "Location". Select the "Procedure" followed by the "Supervisor".

Status: Department:

— Patient —

*Patient ID: *Last Name: *First Name:

*Date of Birth:

— Procedures/Diagnoses —

* Date Performed: Location:

* Procedure:
0 Logged 0 Confirmed

Supervisor:

Select the "Diagnosis" from the drop down menu.

Status: Department:

— Patient —

*Patient ID: *Last Name: *First Name:

*Date of Birth:

— Procedures/Diagnoses —

* Date Performed: Location:

* Procedure:
0 Logged 0 Confirmed

Supervisor:

Group:

* Diagnosis:
[+ Add Diagnosis](#)



Complete the "Examined By", "Patient Encounter Type" and choose whether you feel this case should be presented for the monthly "OMGR" (oral medicine grand rounds) session or the monthly "Case Review" or select "No" if not suitable for presentation.

Check the box if the patient has an active cancer diagnosis.

Select the "Session" from the drop down menu.

Examined By:	Attending & Resident	Diagnosis Detail:	
* Patient Encounter Type:	OM-1		
Presentation:	Case Review		
		* Cancer-Related?:	All None Invert
			<input checked="" type="checkbox"/> No
			<input type="checkbox"/> Yes
		* Session:	AM

Remaining Characters: 5000

Before the monthly case review session, the C resident must email Louise Whitehouse (program coordinator) who will generate a report of all residents NI log



Clinical photography policy and steps

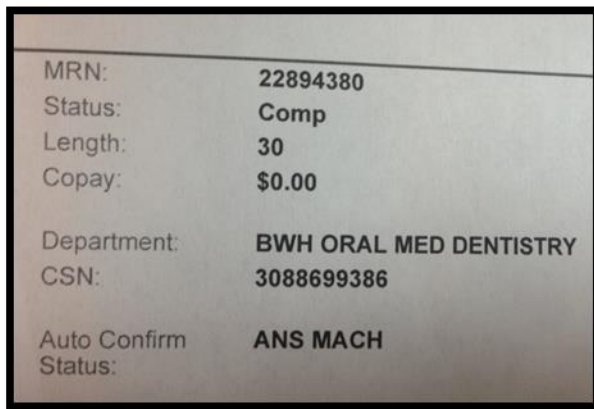
During the A and C rotations residents are expected to document clinical cases with intraoral (and extraoral when necessary) photographs.

Guidelines:

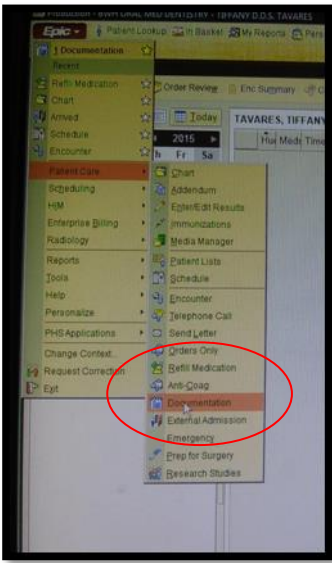
1. In the event that the camera setting has to be changed (e.g. for an extraoral photograph), please remember to return the camera to the normal intraoral setting immediately.
2. Please do not photograph the full routing slip as the name is not to be captured.

Steps:

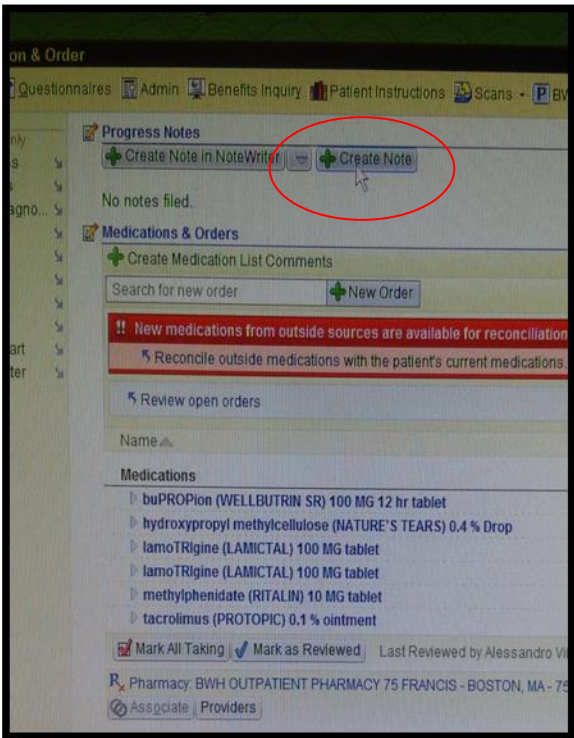
1. Please make sure that the card reader is in the camera and make sure that the camera's battery is charged.
2. Please capture the MRN from the top right of the routing slip as shown in the image below.



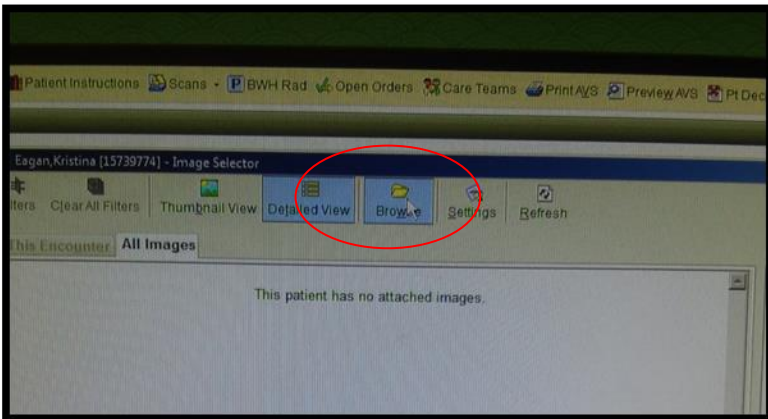
3. Proceed with taking the clinical images and upload to EPIC in "documentation".
4. Follow the steps below as demonstrated in the series of pictures below:



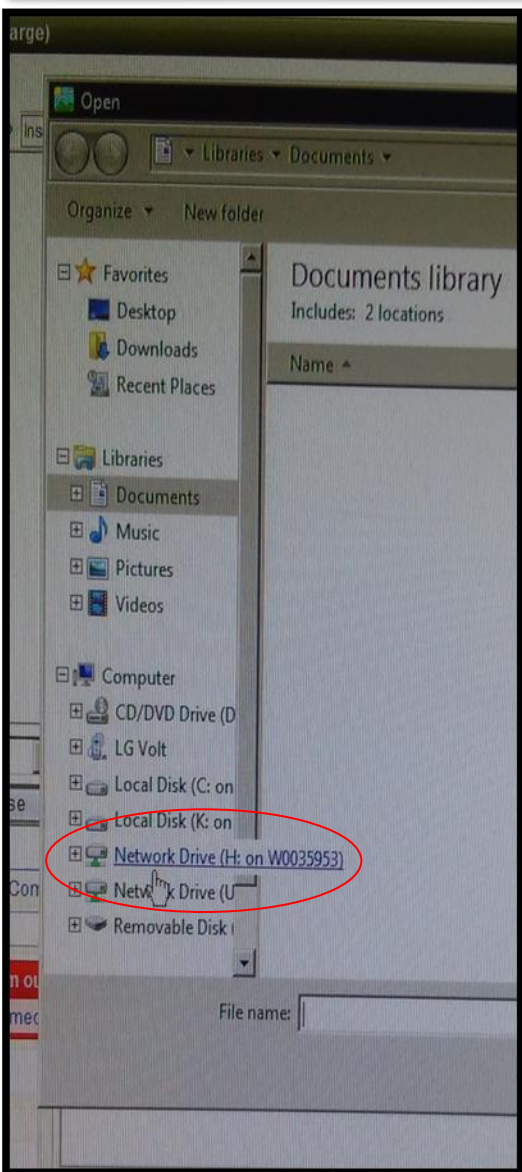
A



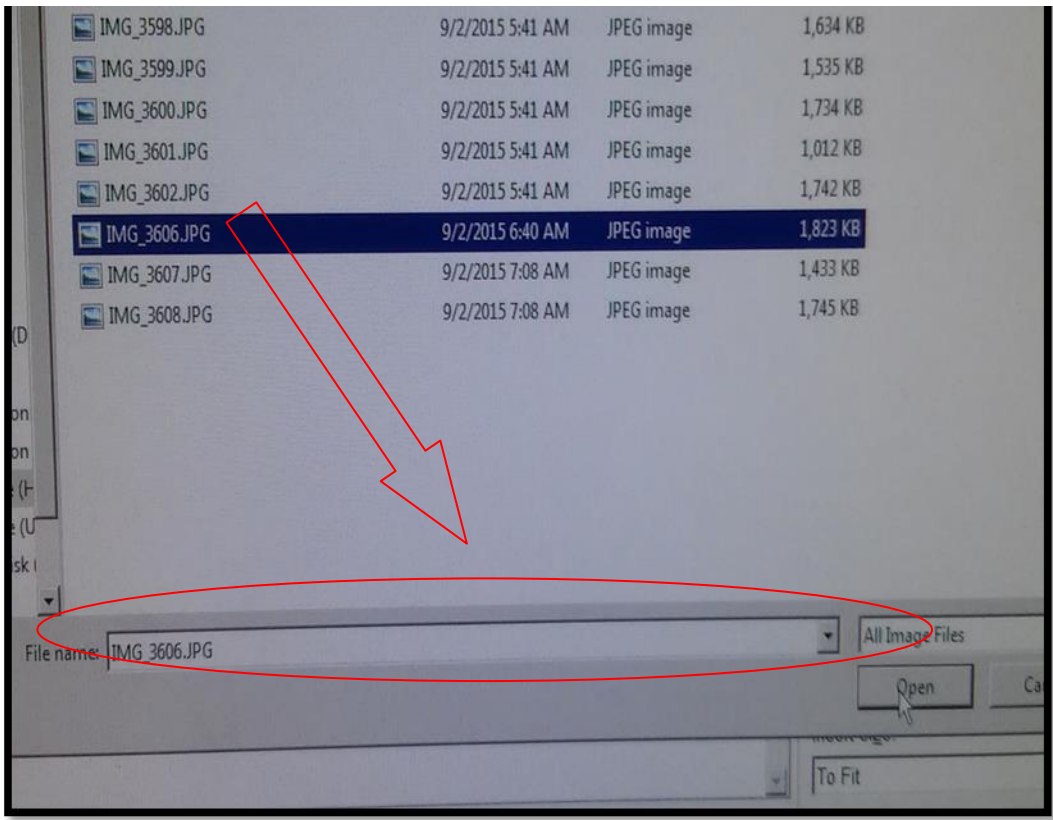
B



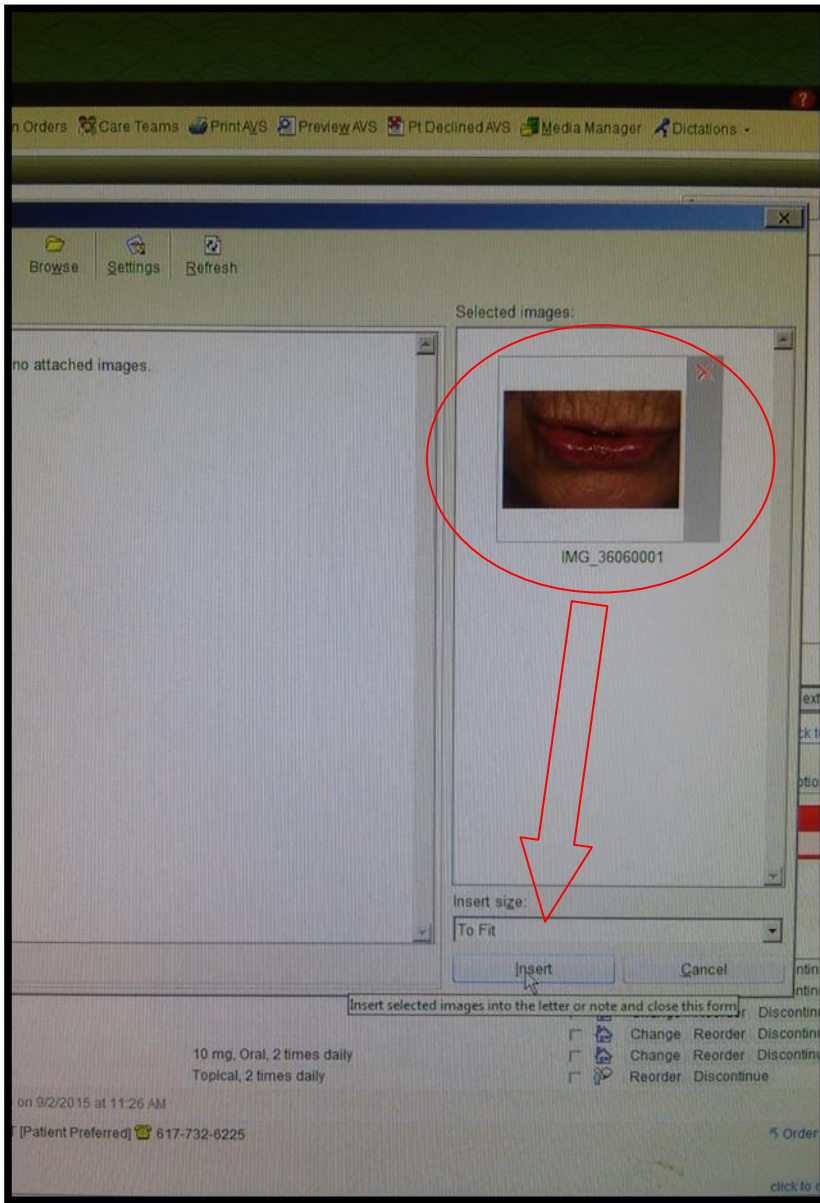
C



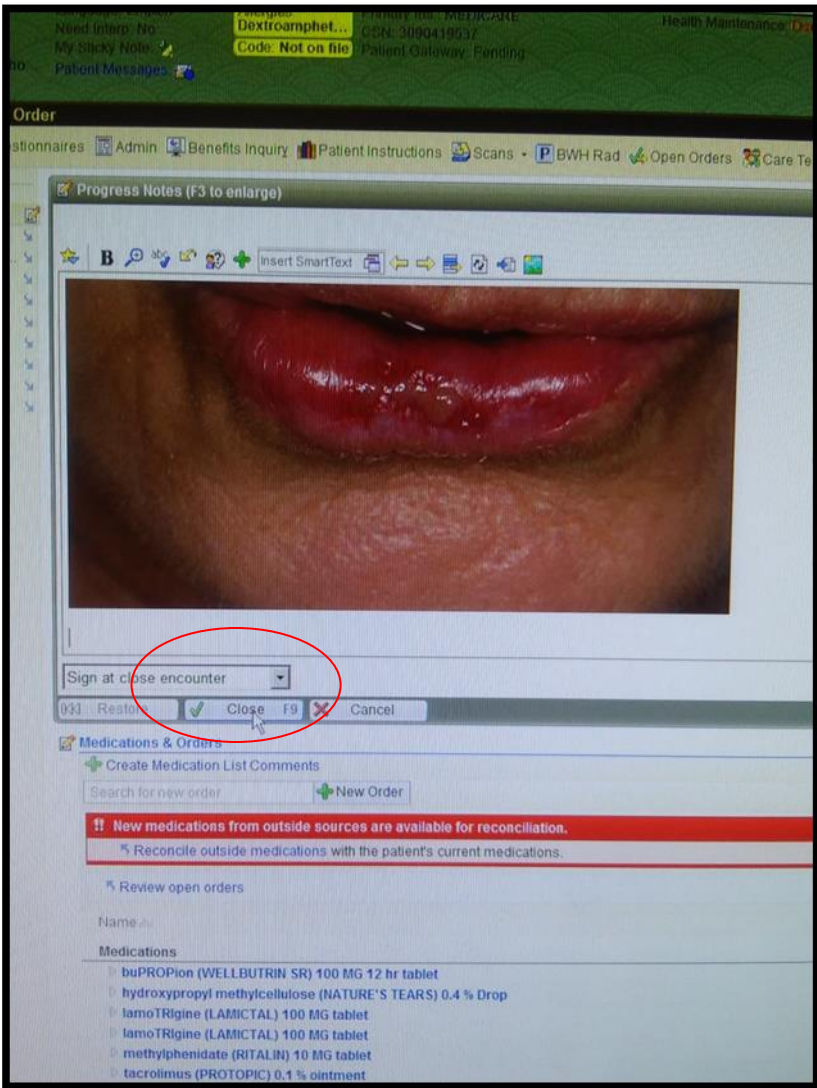
D



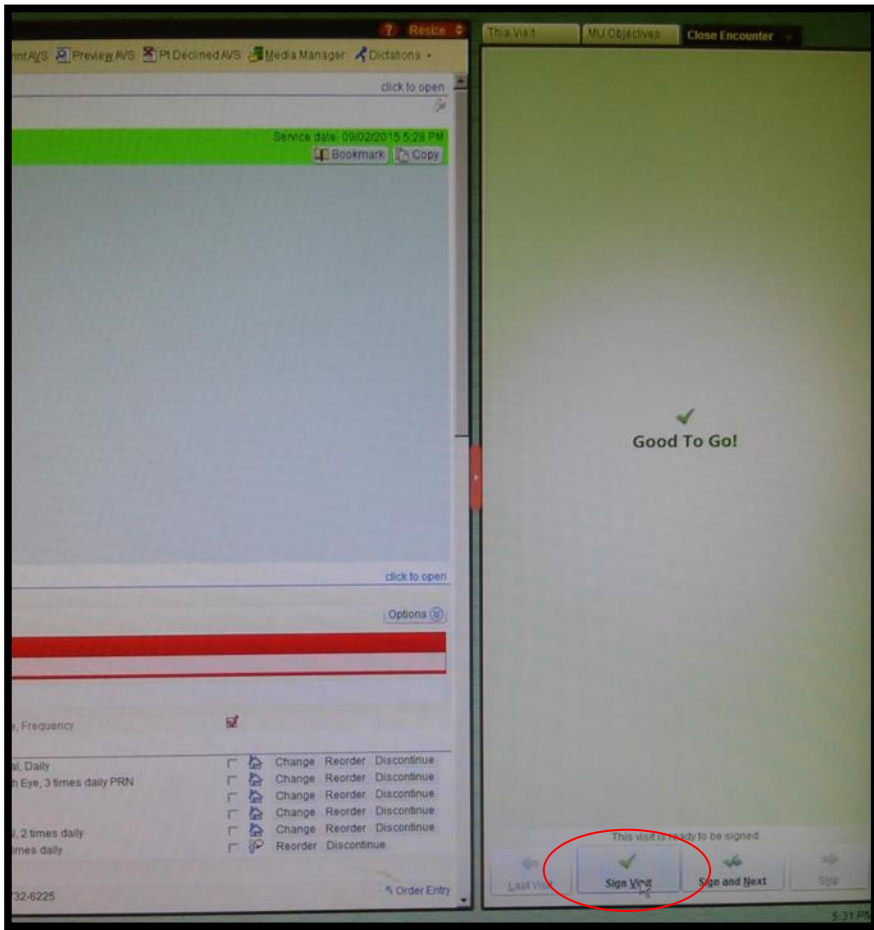
E



F



G



H

- Remember to delete the MRN photo from the card reader when finished.



CORE CLERKSHIPS

Oral Medicine & Dentistry Consult Service (A)

2 blocks (3 months per block)

During this block rotation the resident is responsible for managing the inpatient consult service. Residents are also responsible for four/five outpatient clinic sessions per week, with the focus being oral healthcare management of medically complex patients and coordination and provision of emergent care for inpatients. Residents will perform oral surgical procedures in the operating room at least one time per block. The resident will become proficient in interacting with the medical staff and examining and treating patients who are severely immunocompromised and/or otherwise medically complex. Residents will also provide daytime Emergency Department coverage. Residents are responsible for evaluation of organ transplant, cardiac valve, head and neck cancer, and chemotherapy patients either by direct patient care or consulting on off-site dental evaluations.

Goals and Objectives

- Understand the role of the oral medicine consult service within the hospital framework
- Learn to work inter-professionally with the hospital staff, including nurses, physician assistants, physicians in training, and attending
- Understand the appropriate use and interpretation of laboratory and diagnostic tests in the context of inpatient consultations
- Provide clear and concise consultation notes and clinical recommendations and demonstrate good communication (all forms: spoken, written, electronic) with the various members of the health care team

Consult bag

The "A" resident is responsible for maintaining a fully supplied on-call consult bag on a weekly basis (every Monday morning). A checklist will be provided and placed in the bag at all times for residents to mark used items.

Hematopoietic Cell Transplantation Service (B)

Certificate track: 2 blocks (3 months per block)

Residents are fully immersed in the hematopoietic cell transplantation program during this rotation. Residents round with the BMT A team Mondays and Thursdays, and with the BMT B team Tuesdays and Fridays. Residents are responsible for completing the pre-BMT evaluations from outside dentists and rounding regularly on all HSCT patients.

BMT-A House Staff Service

The Bone Marrow Transplant Housestaff service (BMT-A) is devoted to patients who are preparing for, undergoing, or suffering from complications of hematopoietic stem cell transplantation. The majority of patients admitted to this service are undergoing myeloablative or cord blood stem cell transplants. Teaching rounds occur daily from 7:30-11:30 am (meet at 6A). Educational topics discussed during rounds include rationale for transplantation, conditioning regimen, donor source, and GVHD prophylaxis. A dedicated 30 minute session on Fridays reviews infectious, pulmonary and GI complications transplantation. The team is made up of a faculty member specializing in BMT and 1 resident and 2 interns from the internal medicine residency program at BWH. A pharmacist rounds daily with the team and a hematology-oncology fellow is available intermittently throughout the year. The housestaff cover the patients from 7am-7pm Monday-Friday. A nightfloat resident covers the patients overnight. The BMT service varies greatly with



respect to workload and number of patients. The census can range from 12-18 patients and care can range from routine transplantation to multi-organ system failure as a result of infection or GVHD.

BMT-B PA Service

The Bone-Marrow Transplant Physician Assistant (PA) service (BMT-B) is comprised of a team of Physician Assistants who are trained in and maintain competencies in the management of bone marrow transplantation and its complications. The team manages mostly autologous and reduced-intensity allogeneic transplants. Patient rounds occur daily starting at 8:00am, with a Bone Marrow Transplant attending, nurse and pharmacist, as well as caregivers of other disciplines who all contribute to the care of the patients. A Hematology-Oncology Fellow is available intermittently throughout the year. The census on BMT-B can range from 12-20+ patients and the care can range from routine transplantation issues to multi-organ system failure as a result of infection or GVHD. The PAs are first responders to clinical issues that arise during any given day from 7am-7pm, 7 days a week. A nocturnist physician covers the patients overnight.

New admissions: all new BMT admissions should be seen within 1-2 days of admission to evaluate baseline oral health status, ensure completion of required dental care, and provide patient education.

Goals and Objectives

- Develop a strong basis in the epidemiology, pathophysiology, and medical management of various medical conditions that may be treated with hematopoietic cell transplantation (HCT)
- Understand the rationale for autologous and allogeneic (HCT) including the conditioning regimen and stem cell source
- Understand the timeline of transplantation especially with respect to risk of infection, GVHD, and other transplant-related complications
- Develop a clear and profound understanding of the importance of good dental health in patients undergoing HCT as well as the various infectious and non-infectious early and late oral complications that can arise in the context of HCT
- Function as an integral member of the multidisciplinary HCT team
- Learn the principles of GVHD (acute and chronic) epidemiology, pathophysiology, diagnosis and management

Faculty preceptors:

Brett Glotzbecker, MD (bglotzbecker@partners.org)

Oral Medicine (C)

Residents rotate through the Division of Oral Medicine and Dentistry's Oral Medicine clinic at Brigham and Women's Hospital. Typical cases include patients with mucosal diseases such as lichen planus and leukoplakia; patients with burning mouth syndrome; patients with oral manifestations of systemic disease; and patients with chronic graft-versus-host disease and other cancer-related complications. Residents obtain a history and perform a head and neck exam, then present the findings, provide a differential diagnosis and suggested treatment plan.

Goals and Objectives



- Develop effective skills in obtaining a complete medical history and writing clinical notes
- Develop proficiency in the appropriate use and interpretation of diagnostic tests
- Develop proficiency in generating an appropriate differential and working diagnosis
- Develop proficiency in determining the most appropriate treatment plan, including pharmacotherapeutics, patient education and counselling, and monitoring and follow-up

Faculty preceptors:

Nathaniel Treister, DMD, DMSc

Vidya Sankar, DDS, MHS,

Sook Bin Woo, DMD, MMSc

Alessandro Villa, DDS, PhD, MPH

OFF SERVICE ROTATIONS

Oral and Maxillofacial Surgery (4 weeks) (E*)

Residents learn the fundamentals of OMFS and the correct terminology for a variety of OMFS conditions. Residents present their findings, differential diagnoses and treatment plan to the attending oral surgeon. Residents also have the opportunity to assist with and perform dental extractions and complex oral biopsies.

Goals and Objectives

- To receive exposure to simple and surgical dental extractions
- To receive exposure to the dental management of medically compromised oral and maxillofacial surgery patients
- To have exposure in the management of oral bacterial infections, wound care and wound healing

Residents attend the OMFS clinic at Massachusetts General Hospital.

Faculty preceptors:

Maria Troulis, MD (mtroulis@partners.org)

Hematology/Oncology (1 month Adult, 1 month Pediatric)

Residents observe and participate in the evaluation, diagnosis and management of patients in the pediatric and adult hematology/oncology inpatient and outpatient clinics at DFCI, Brigham and Women's Hospital, and Children's Hospital Boston. Residents gain in-depth practical clinical experience in hematopoietic cell transplantation and graft-versus-host disease. This rotation provides insight into how to interpret hematologic tests, perform a bone marrow biopsy and read blood smears. From observing the interaction between physician and patient in this particular rotation, residents learn to treat patients with empathy and professionalism.

Residents attend the Adult Hemophilia Clinic on Wednesday mornings during the adult rotation.

Wednesdays 8 AM-12 PM, Meet in workroom of room Y762

Hematology Clinic with Dr. Aric Parnes, Paula Temoczko, NP, Christine Mitchell, LICSW, and Latoya Lashley, Research Coordinator.

Boston Hemophilia Center, Adult Service Clinic, Dana Farber Cancer Institute, Yawkey Building 7th Floor

Patient population:



Persons with congenital bleeding disorders: hemophilia A, hemophilia B, von Willebrand disease, platelet disorder, Glanzmann thrombasthenia, factor VII deficiency, factor X deficiency, factor XI deficiency, factor XIII deficiency, vascular bleeding disorders.

Patients with congenital thrombotic disorders: congenital antithrombin III deficiency, protein S deficiency, protein C deficiency

Patients with acquired thrombotic disorders: lupus anticoagulant, antiphospholipid antibodies

Goals and Objectives

- Understand the clinical work-up involved in the diagnosis of benign and malignant hematologic conditions
- Understand the role of the various diagnostic tests involved in hematology and hematology/oncology, including molecular and genetic tests
- Develop a strong understanding of the principles of therapy in benign and malignant hematologic conditions, including oral and intravenous medications as well as the roles for autologous and allogeneic hematopoietic stem cell transplantation
- Understand the range of potential oral manifestations and complications that can arise in patients with hematologic conditions, how to conduct an appropriate risk assessment

Contacts:

Katie Kupferberg (kkupferberg@partners.org; Adult Hematology/Oncology)

Faculty preceptors:

Christy Duncan, MD (cduncan@partners.org; Pediatric Hematology/Oncology)

Paula Temoczko, NP (ptemoczko@partners.org; Hemophilia Clinic)

Corey Cutler, MD (cscutler@partners.org; Adult Hematology/Oncology)

Dermatology (1 month)

Residents learn the fundamentals of dermatology, including how to perform a skin examination on patients. Residents learn the correct terminology for a variety of skin conditions and present their findings, differential diagnoses and treatment plan to the attending dermatologist. Residents also have the opportunity to assist with and perform skin punch biopsies, cryotherapy and intralesional injections.

Goals and Objectives

- Review the epidemiology, pathophysiology, diagnosis and management of the most common dermatologic conditions
- Understand the principles of a full skin exam
- Understand the various diagnostic tests used in dermatology
- Review the medical management of patients with mucocutaneous disease with particular emphasis on the basic principles of dermatological therapeutics

Contact: Mackenzie Leonard (mleonard6@partners.org)

Otolaryngology/Head & Neck Oncology (1 month)

Residents see patients referred to the Division of Otorhinolaryngology for a variety of head and neck complaints. Residents have the opportunity to observe the diagnosis and management of patients with a wide range of ENT



conditions in the inpatient, outpatient, and operating room setting, ranging from benign to malignant. Residents attend the Head and Neck Tumor Board at DFCl and gain extensive experience in head and neck oncology during this rotation.

Goals and Objectives

- Review and demonstrate a clear understanding of the radiographic and clinical aspects of head and neck anatomy
- Learn the epidemiology, pathophysiology, diagnosis and management of the most common ENT conditions
- Understand the principles of ENT physical examination and head and neck imaging
- Identify potential non-odontogenic causes of orofacial pain/symptoms, and know when referral to an ENT specialist is indicated

Contact: Jayme Dowdall, MD (jdowdall@partners.org)

Oncology (2 weeks)

Residents observe and gain practical clinical experience in the evaluation, diagnosis and management of patients in a variety of oncology clinics at DFCl. Time is divided between breast, lung, genitourinary, sarcoma, and the early phase clinical research program.

Goals and Objectives

- Understand the fundamental principles of clinical diagnosis and management of patients with solid cancers
- Become familiar with medical considerations that impact the management of oncology patients
- Gain an appreciation for the role of clinical research in oncology, in particular early phase studies

Contact: Ann LaCasce, MD (alacasce@partners.org)

Head & Neck Radiology (1 week)

Residents observe all aspects of imaging studies at the Mass Eye and Ear Infirmary with faculty members. Residents learn the principles for the evaluation of CT scans, MRI's and newer imaging technologies such as PET scans, as well as other nuclear medicine studies.

Goals and Objectives

- Understand the principles of head and neck imaging and the indications for and limitations of different imaging studies
- Become familiar with the radiographic interpretation of advanced head and neck imaging studies, including identification of the study type and plan, as well as description of basic hard and soft tissue anatomy
- Understand how to interpret the written radiology report

Contact: Linda Burke (linda_burke@meei.harvard.edu)

Advanced Imaging & Nuclear Medicine (1 week)

Residents observe and learn the principles of all aspects of advanced imaging used for the diagnosis and management of cancer patients at DFCl.

Goals and Objectives

- Know the types of advanced imaging studies used in oncology



- Understand the various clinical indications for advanced imaging studies in oncology
- Be familiar with interpretation of advanced imaging studies used in oncology, with respect to key clinical features and terminology

Contact: Annick Van Den Abbeele, MD (abbeele@dfci.harvard.edu)

Infectious Diseases (2 weeks)

During this rotation residents gain experience in the evaluation and diagnosis of patients with a variety of infectious complaints on an inpatient and outpatient basis. The outpatient facility sees mainly patients with HIV disease as well as a specialized hematology/oncology clinic. Residents learn the appropriate use of standard antimicrobial medications as well as new agents in the management of localized and systemic infections.

Goals and Objectives

- Recognize the central role of the infectious disease consult service in the hospital and cancer center
- Gain familiarity with the indications for and interpretation of diagnostic tests in infectious diseases
- Understand the principles of therapy and management in infectious diseases

Contact: Sabrina Alyse Klein (sklein@bwh.harvard.edu)

Faculty preceptor: Paul Sax, MD (psax@partners.org)

Pain Clinic (1 week)

Residents learn about the fundamental principles of acute and chronic pain assessment and management in both the inpatient and outpatient settings.

Goals and Objectives

- Understand the role of the pain service in a hospital and cancer center
- Learn the basic principles of clinical pain assessment
- Become familiar with the range of available pharmacologic and non-pharmacologic therapeutic options in the management of chronic pain
- Recognize the role of therapy and counseling in management of chronic pain

Contact: Edgar Ross, MD (elross@partners.org)

Headache Clinic (1 week)

Residents observe the diagnosis and management of patients referred for a variety of orofacial pain and headache disorders. Residents learn the principles of proper use of pharmacological agents as well as alternative therapies for the treatment of chronic pain.

Goals and Objectives

- Review the clinical spectrum of headache disorders
- Understand the clinical work-up of a patient with headache symptoms
- Become familiar with the principles of therapy of the most common headache disorders

Headache Clinic: Faulkner Hospital

Contact: Paul Rizzoli, MD (prizzoli@partners.org)



Rheumatology, Allergy & Immunology (2 weeks)

Residents learn about the diagnosis and management of patients with rheumatologic, autoimmune, and allergy disorders. Special emphasis will be placed on history taking, physical examination, and the appropriate use and interpretation of laboratory and imaging tests. Residents also gain experience in the use and limitations of allergy testing.

Goals and Objectives

- Understand the work-up of a patient suspected to have a rheumatic condition, with particular emphasis on history taking, use of laboratory medicine, and the roles of imaging and pathology
- Become familiar with the range of pharmacotherapeutic approaches to managing rheumatic, immunologic and autoimmune conditions, including rationale for use of various agents as well as necessary monitoring
- Be able to recognize oral manifestations of systemic diseases and understand the role for oral medicine in management of such patients

Contact: Simon Helfgott, MD (shelfgott@partners.org)

Externships (elective)

Domestic and foreign Oral Medicine externships of up to 4 weeks can be arranged and are encouraged. Any time taken for externship will count towards E rotation. Externships must be planned well in advance. Residents are responsible for travel and accommodations.



ORAL MEDICINE RESIDENCY POLICY ON SUPERVISION OF RESIDENTS

1. Residents will treat patients only under the supervision of staff attending dentists who are independently licensed and credentialed by the Brigham and Women's Hospital.
2. Each outpatient will have an attending staff dentist of record who is responsible for reviewing all notes and radiographs, countersigning all notes and treatment plans, determining and implementing the appropriate level of supervision of the resident, and performing a clinical and written evaluation of the care provided at the completion of comprehensive care of the patient.
3. Inpatient consultations will be responded to by the resident within 15 minutes. Each inpatient consultation will have an attending staff dentist of record who is responsible for examining the patient either together with the resident or at a separate time, reviewing radiographs, and reviewing and countersigning the inpatient consultation. This attending dentist will determine and implement the appropriate level of supervision of the resident. The attending dentist will also see follow-up patients as needed, either together with the resident or at a separate time, and will countersign the resident's notes or document his/her evaluation separately as needed.
4. Patients shall be notified of the name of the attending dentist responsible for their care, of the respective roles of the residents and attending dentists involved in their care, and that residents participating in their care are supervised by such staff dentists.
5. In providing clinical supervision to residents, the attending dentist shall liberally provide advice and support, shall encourage residents to freely seek their input and should delegate portions of care to residents, based on the residents' skills and the needs of the patient.
6. The faculty must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities, and to demonstrate a strong interest in the education of residents.
7. Faculty supervision assignments should be of sufficient duration to assess the knowledge and skills of each resident and delegate to him/her the appropriate level of patient care authority and responsibility.
8. Residents are expected to make liberal use of the supervisory resources available to them and are encouraged to seek advice and input from attending dentists and more senior residents or fellows, as appropriate. Residents are expected to seek advice for any question involving patient care, including dental/medical therapeutics, diagnostics, safety, documentation, privacy and behavior management, and for any questions on practice and staff management and operational protocols.
9. Each resident's clinical responsibilities will be based on PGY-level and resident education, patient safety, severity and complexity of patient illness/condition, and available support services.
10. Residents shall consult with their supervising attending dentist, and the attending dentist shall, in turn, be available at all times to provide guidance and support to the resident. The availability of the attending dentist to the resident must include: a) carrying a beeper or cell phone to provide telephone consultation and b) being in reasonable proximity to the hospital in order to provide, as needed, on-site supervision and consultation to the resident. If not available for a period of time, the attending dentist is responsible for arranging and communicating appropriate attending coverage to the resident.
11. During regularly scheduled office hours, residents will have at least **indirect supervision with direct supervision immediately available** (the supervising dentist is physically within the clinic or hospital, and is immediately available to provide direct supervision by being physically present with the resident and the patient.) When performing advanced outpatient procedures, residents will pre-arrange with the appropriate attending for **direct supervision** (the supervising dentist is physically present with the resident and the patient).



12. During patient care in the **Emergency Department**, ED staff will provide **direct supervision or indirect supervision with direct supervision immediately available**. Oral Medicine faculty on second call for emergency coverage will provide **indirect supervision with direct supervision available** (the supervising dentist is not physically present within the hospital or other site of patient care, but is immediately available by means of telephone and/or electronic modalities, and is available to provide direct supervision.)
13. All faculty with supervisory responsibilities will be given a written copy of the specific requirements of being the attending of record as outlined above at the beginning of his/her appointment at the BWH. At the beginning of his/her rotation, each resident will be given a written copy of these requirements, the covering attending dentist schedule, and instructions on how to reach each attending dentist.
14. If an attending dentist of record does not answer a page/phone call in a timely fashion and is not signed out to a covering staff dentist, or if immediate help is required in the office or hospital while waiting for a response from the supervising dentist, the resident should contact any of the other staff attending dentists, the program coordinator, or the Program Director.
15. If the resident a) experiences a patient volume or acuity that becomes greater than s/he can appropriately handle, b) becomes ill while on duty or experiences fatigue interfering with performance, or c) is otherwise unable to perform his/her patient care duties, the resident should contact the attending dentist or the program coordinator.
16. At least annually, a report shall be made to the Board of Trustees of the Hospital regarding the activities of the residents and GME training programs.



GUIDELINES FOR INPATIENT CONSULTATIONS

The Oral Medicine and Dentistry consultation service assists the inpatient medical team in the care of the hospitalized patient. It is important that your interactions with physicians and fellow house staff are always helpful and courteous. The following sections describe the consultation service and the responsibilities of the residents.

A. HOSPITALS

The Oral Medicine and Dentistry Consultation Service provides dental consults **ONLY** to inpatients of Brigham and Women's Hospital. Consults for BWH and DFCI outpatients with urgent needs may also be fielded.

Residents are NOT credentialed to evaluate patients at Boston Children's Hospital, the Beth Israel Deaconess Medical Center, the Faulkner Hospital, or any other institutions other than BWH and DFCI.

B. CONSULTATION REQUESTS

1. Consultations must be requested by either the attending physician, house officer or nurse. **NO PATIENT IS TO BE EVALUATED WITHOUT A CONSULTATION REQUEST.**
2. The request for a consultation is initiated by written orders from either the attending physician or responsible house officer into EPIC. Then, either the nursing staff or the house officer pages the BWH Resident (Pager #11560).
3. The resident must record the following information in the consult log book/sheet:
 - 1) Hospital
 - 2) Floor/Pod/Room Number
 - 3) Patient's Name and Hospital Number
 - 4) Medical Diagnosis
 - 5) Reason for consultation
 - 6) Referring Doctor or H.O.

C. RESIDENT ASSIGNMENTS FOR CONSULTATIONS

1. The "A" Resident is responsible for inpatient consultations Monday through Friday, from 5 am - 5 pm. It is the assigned resident's responsibility to complete the consultations.
2. **CONSULTATIONS MUST BE COMPLETED THE DAY THEY ARE REQUESTED.**
3. Consultations called in between 5 pm - 5 am on weeknights and anytime on weekends or holidays are to be completed by the on-call resident, who will forward pages from consult beeper #11560 to his/her own beeper. This on-call resident must communicate with the "A" resident so that the patient can be appropriately followed the next day.

D. RECORD KEEPING

1. It is important to maintain accurate records on all patients evaluated on the Consultation Service.



2. The consultation note is presented on rounds that day or the next morning and is not placed in the patient's medical chart until the covering attending dentist reviews and countersigns it. A short note however **MUST** be entered in the chart to document that the patient has been seen and that a full consult note will be entered.

E. PATIENT EVALUATION and CONSULT NOTE

1. The day of the consultation request, the complete hospital chart is to be reviewed and the patient examined. You can check in the BWH documentation systems, **EPIC for patient information**.

a. If it is determined that the reason for consultation does not require immediate attention, the following note should be written in the progress notes of the medical chart:

“ Mo/Day/Year/Time Dental Note
Asked to evaluate this (____) yr. old (female/male) with (medical problem) for (oral/dental problem).
Chart reviewed, patient examined. Formal consult note to follow.” Signature and beeper number.

The resident then completes the consultation write up and reviews it with the covering attending that day or on rounds the next morning.

b. If it is determined that the oral/dental problem requires immediate attention, the consultation note is to be written, discussed with the covering attending, co-signed by the attending, and placed in the medical chart the day of the request. After approval of the consultation and recommendations by the attending, the resident should communicate, in most cases by telephone, with the patient's House Officer or other doctor that initiated the consultation request.

2. All patients must have a complete oral examination at the bedside the day of the consultation request. Residents are required to carry and maintain a light of sufficient quality to perform bedside oral examinations.

It is important to be thorough but succinct in writing the consultation note. After review of the consult with an attending and an examination of the patient by the attending, the attending will review, edit, and finalize the note and place a printed and signed copy in the medical chart. The following format is to be used when writing consultation notes:

- Patient:**
- MRN:**
- Date:**
- Time:**
- Location:**

ORAL MEDICINE AND DENTISTRY CONSULTATION

ID/CC: *Begin with the reason for the consultation. The introductory paragraph always takes the following form.*
Asked to see this year old sex admitted on(date) with(admitting dx). Dental evaluation requested for(reason)



HPI: *Prose description of events leading up to this admission/illness. Also include events during admission up to the point of your evaluation. If you are being asked to evaluate oral/dental/facial pain you must describe the pain in the usual fashion – onset, duration, triggers, character/sharp/dull, radiation, spontaneous or not, analgesics needed, and patient's description of pain on a scale from 1-10 with 10 being the worst pain s/he has experienced.*

(HPI for admission)

(HPI for oral complaint)

Pain score currently: XX/10

Pain score at worst: XX/10

PMH: *This should be a brief listing of the patient's medical history including oncologic history if applicable.*

MEDS: *List the medications the patient is taking currently, not just the medications on admission.*

ALL: *List allergies and reactions, or write "NKDA/NKA" if none.*

LABS: Date:

WBC/diff:			
HGB		PT	
HCT		INR	
PLT		PTT	
Blood Cx Results/Dates:			

PDH:

Last dental visit and reason for visit	
Sporadic/routine visits	
Extraoral or intraoral symptoms	
Other	

The examination should include a complete head and neck examination before focusing in on the specific dental problem. All significant positive and negative findings should be noted.

GE: Alert and oriented; wheelchair bound, etc.

Extraoral Examination:

Extraoral swelling/asymmetry	
TMJ pain, clicking, popping, crepitus	
Lymphadenopathy	
Trismus, other	



Intraoral Examination:

Soft Tissue:

Buccal, labial mucosa	
Palate/pharynx	
Tongue	
Floor of mouth	
Gingiva (inflammation, purulence, recession)	
Other	

Hard Tissue:

Teeth Present	
Caries	
Fractures/Root Tips	
Percussion Sensitivity	
Mobility	
Plaque/Calculus	
Other	

Prosthesis:

Type/Condition	
----------------	--

RADIOGRAPHIC INTERPRETATION: Radiographs are typically obtained at bedside with a portable x-ray unit. If the patient requires a panoramic radiograph or multiple radiographs then the radiographic exam should be done on a separate visit to the Oral Medicine and Dentistry clinic after the initial bedside exam. In such a case you can just write “Pending” for the radiographic exam, and the actual radiographic interpretation can be written on a separate note after the radiographs are taken. Never call down an inpatient to the dental clinic unless you have cleared with the H.O. that the patient is medically stable enough to travel.

Panoramic radiograph and ... (how many) intraoral periapical radiographs obtained on (date).

Maxillary sinuses	
Bony pathology	
Maxillary or mandibular fractures	
Trabeculation pattern	
Alveolar crestal height decrease	
Teeth present	
Impactions/supernumeraries	



Gross caries	
Caries	
Root tips/fractures	
Apical pathology	
Root Canals/Other	

ASSESSMENT: *The first item to address is always the issue that you were asked to consult on. Any other diagnosis you make should also be listed. Any pathology you find, whether related or unrelated to the reason for consult, should have a differential diagnosis with the most likely diagnosis listed first. This is also the section where you can write any prose explanation and document discussions with the patient or medical staff. The assessment always takes the following form:*

“(Age) yo male/female admitted on (date) with (medical diagnosis) awaiting (eg. aortic valve replacement scheduled for tomorrow) presents with:

1. Maxillary right first molar with gross caries and chronic apical periodontitis that is a source of infection
2. Multiple small carious lesions
3. Mild alveolar crestal bone loss consistent with mild periodontitis

Discussed with patient and H.O. risk of bacteremia from chronic infection of non-salvageable maxillary right first molar. Patient agrees to extraction under local anesthesia. (Actual written consent is obtained just prior to the extraction.) Surgical H.O. and surgical attending have cleared patient for extraction prior to AVR.”

RECOMMENDATION: Only **recommendations** are made. The admitting physician is ultimately responsible for the care of the patient and **NO TREATMENT IS EVER TO BE RENDERED WITHOUT THE KNOWLEDGE AND APPROVAL OF EITHER THE ADMITTING PHYSICIAN OR RESPONSIBLE HOUSE OFFICER AND AN ORAL MEDICINE ATTENDING.**

This should be a succinct list of what you intend to do or instructions for the surgical team. For example:

- 1) Extraction of maxillary right first molar under local anesthesia at 2PM on 5-1-05
 - 2) D/C heparin at 8AM on 5-1-05
 - 3) 2.0 gm Amoxicillin po at 1PM on 5-1-05
 - 4) Transport of patient to Oral Medicine and Dentistry Clinic at 2PM on 5-1-05 to be arranged by floor
 - 5) Pt does not need to be NPO before extraction
- a) Always specify dosage and frequency when recommending medications, especially rinses and mouthwashes
 - b) Always indicate whether or not the patient will be **followed** by the service.
 - c) Include at the end of the consult note a statement **thanking** the physician for the consult.
 - d) **Printed Name, Signature, and Pager Number** of Oral Medicine resident and attending. Attendings will include a line to the effect that s/he has examined the patient and concurs with the resident’s findings, assessment, and recommendations and that s/he was actively involved in planning the patient’s care (see below).



Thank you for the referral. We will/will not follow.

RESIDENT NAME (pager #11560)
PGY Year
Division of Oral Medicine and Dentistry

F. FOLLOW-UP

It is the "A" resident's responsibility to contact the house officer and follow up on the recommendations listed in the consultation note.

G. FOLLOW-UP PROGRESS NOTE

Whenever a patient is evaluated or treatment is rendered, whether on the floor or in the Oral Medicine and Dentistry clinic, a note must be written in the Progress Note section of the patient's hospital chart. The progress notes should be written using the following SOAP format:

- Patient:**
- MRN:**
- Date:**
- Time:**
- Location:**

ORAL MEDICINE AND DENTISTRY FOLLOW-UP

Subjective:
Mr/Ms XX is a XX year old male/female with XX. He/She reports

Pain score currently: XX/10
Pain score at worst: XX/10

Labs:
Date:

WBC		PT	
HGB		PTT	
HCT		INR	
PLT			

h/o + blood cultures since admission (if yes, list): Yes/No

Objective:
She/he has



Assessment:

XX year-old male/female with history of XXX presents with:

- 1.
- 2.

Plan:

- 1.
- 2.

Thank you for the referral. We will/will not follow.

RESIDENT NAME, DMD (pager #11560)
PGY Year
Division of Oral Medicine and Dentistry

All progress notes written by a resident must be countersigned by the covering attending dentist. Attach a copy of the follow up note to the copy of the original consult note and keep on file in the Oral Medicine staff room.

H. WEEKEND FOLLOW-UP

Two groups of patients require follow-up on weekends: 1) inpatients who need post-operative follow-up after a procedure (e.g. dental extraction), and 2) patients already being followed on a daily basis for their oral condition. On Friday, the covering attending will review the patients on the service and designate which patients need to be followed over the weekend. This will be conveyed by the "A" resident to the weekend on-call resident.



GUIDELINES FOR EVALUATING HEMATOPOIETIC STEM CELL TRANSPLANTATION (HSCT) PATIENTS

A. REQUESTS FOR DENTAL EVALUATIONS

The request for an outpatient dental evaluation of a pre-HSCT patient is initiated by the requesting service. The patient's transplant coordinator will contact the Oral Medicine receptionist or resident to schedule the patient. Whenever possible, patients should be scheduled at least two weeks prior to their hospital admission.

B. PATIENT EVALUATIONS AND PROGRESS NOTES

1. HSCT Outpatient Evaluations

CAUTION:

- a) **CHECK WHEN THE LAST CYCLE OF CHEMOTHERAPY WAS DELIVERED (IF ANY).** Chemotherapy may cause neutropenia and thrombocytopenia. After a cycle of chemotherapy, the nadir for immunosuppression is usually reached in 7-10 days. Blood counts then start to recover. The best time to see a patient for dental treatment is when the counts are recovering and just before the next cycle of chemotherapy starts.
- b) **CHECK THE MOST RECENT LAB RESULTS.** Patients with ANC<500 or platelets less than 50,000 should not have dental treatment performed. Patients with ANC<1000 should receive antibiotic prophylaxis. In RARE instances when a patient with <50,000 platelets absolutely must have a dental surgical procedure, platelet infusions are necessary.

OBJECTIVE:

The purpose of the pre-HSCT dental evaluation is to eliminate any active or potential sources of infection and to ensure good oral health for an extended period of time. Keep in mind that the patient will be immunosuppressed for up to several months or even longer if graft-versus-host disease (GVHD) develops.

PROCEDURE:

- a) Obtain full PMH, expected medical treatment plan for the patient (chemo, full body irradiation), start date of cancer treatment, previous chemotherapy cycles with start and end dates
- b) Complete dental examination and full mouth series of radiographs. If the patient has third molars, also take a panoramic film. Panoramic radiographs alone are NOT adequate for these patients.



- c) Educate the patient on the significance of oral health and the potential oral complications in chemotherapy, including mucositis, xerostomia, altered taste sensation, odontalgia, bleeding and infection.
- d) Prophylaxis, scaling and root planing if necessary, and oral hygiene instruction.
- e) Extract teeth with a hopeless or guarded prognosis, including root tips, teeth with severe periodontitis, etc.
- f) Perform any needed endodontic treatment only if there is enough time before the BMT to ensure endodontic success.
- g) Third molars in pre-HSCT patients:
 - a. Should be extracted if they are full soft tissue impacted and have been symptomatic.
 - b. Should be extracted if they are partial soft tissue impacted.
 - c. If they are erupted with a deep distal pocket, then you should consider extraction or a distal wedge if there is a history of symptoms. Distal wedge procedures have variable success.
- h) Teeth that are symptomatic after endodontic therapy need careful reevaluation and may require retreatment, surgery or extraction.
- i) All teeth that have received direct/indirect pulp caps or have large restorations should have their vitality tested.
- j) Restore all caries, fractures, defective restorations.
- k) Relieve ill-fitting prostheses.
- l) Prosthetic treatment can be deferred until after HSCT.

2. HSCT Inpatient Evaluations on Rounds

a) When a patient is admitted for HSCT, our service will begin to follow the patient on rounds with the BMT team (i.e. the "B" rotation). **It is the responsibility of the resident to check the admit list (which is emailed by the attending) prior to rounds each morning to determine if there have been any new HSCT admissions.**

c) Oral care instructions for HSCT patients in house include Peridex rinse bid, Nystatin or Mycelex troches qid, and GelKam. Patients will be given a soft toothbrush and toothpaste.

3. Post HSCT Discharge Instructions



- a) Brush TID with a soft brush softened with hot water. Use fluoridated toothpaste. Brush gently in the beginning.
- b) Floss QD.
- c) Soak dentures qhs in 1:10 bleach dilution.
- d) For routine dental care, patients can see a dentist 6 months after an autologous transplant or 12 months after an allogeneic transplant due to delayed immune reconstitution and concern regarding risk of infection. These are only guidelines and patients that require emergent dental care must be treated.

4. Graft vs. Host Disease (GVHD)

Graft-versus-host disease (GVHD) is a significant complication following allo-HSCT and a major cause of morbidity and mortality. The oral cavity is frequently involved in GVHD, leading to pain, functional impairment, and reduced quality of life. GVHD may occur at about 100 days post HSCT or later. In the mouth it presents as hyperkeratotic reticulations and plaques, ulcers, erythema, and xerostomia. Oral pain can be managed with bland diets, cold foods, viscous lidocaine, kapectate/Benadryl/lidocaine rinse, topical steroids, and diluting or eliminating Peridex.

Oral involvement of acute GVHD is rare and must be differentiated from mucositis and infections. Oral features of aGVHD may be the initial manifestation and include nonspecific erythema and ulcerations of keratinized and nonkeratinized mucosa and lips. Intensive topical therapies may help reduce symptoms and promote healing. Xerostomia can be managed with sugar free gum/candy, saliva substitutes, Vaseline to the lips, water spray bottles, and Biotene products.

Chronic oral GVHD is characterized by lichenoid inflammation that can involve all intraoral sites, but particularly affects the tongue and buccal mucosa. It typically develops 6-24 months after allogeneic HSCT and is managed in the outpatient setting with topical steroids being the mainstay of therapy. However, in severe/complicated cases, a patient may be admitted and a consult may be requested.



GUIDELINES FOR EVALUATING ORGAN TRANSPLANT, CARDIAC VALVE, HEAD AND NECK CANCER, AND CHEMOTHERAPY PATIENTS

You may encounter these patients as inpatients or outpatients. Specific patient management issues that you may have concerning organ transplant, head and neck cancer, and cardiac valve patients should be discussed with an attending.

A. SOLID ORGAN TRANSPLANT PATIENTS

Whether an organ transplant is for heart, lung, liver or kidney, the patient will be immunosuppressed for life on anti-rejection medication. The goals for a dental evaluation prior to organ transplantation are to eliminate all active and potential sources of infection and to restore the patient to good oral health with periodontal, restorative, and endodontic treatment as needed. Ideally, as long as the patient can tolerate dental treatment, the organ transplant patient should have all his/her dental needs addressed while waiting for transplantation. It is important to keep in mind that these patients often cannot seek dental care for several months after transplantation while their immunosuppressive medications are being titrated. With these considerations in mind, the pre-organ transplant work up and treatment should include:

1. Consultation with the patient's physician concerning the patient's medical status, ability to tolerate dental treatment, and other precautions, such as:
 - i. Cardiomyopathy patients - often have **artificial cardiac valves** and need antibiotic prophylaxis. Also check for **pacemakers** in which case ultrasonic scalers, pulp testers and other electrical dental equipment may be contraindicated.
 - ii. Renal Dialysis patients – patients with **vascular access** need antibiotic prophylaxis. These patients also need to be treated on non-dialysis days because of **heparinization** during dialysis. Precautions are needed when prescribing or administering drugs cleared by the kidneys.
 - iii. Liver Failure patients – check **coagulation** parameters, CBC, and differential before treatment. Precaution should be taken in prescribing or administering drugs cleared by the liver. These patients may require FFP prior to multiple extractions.
2. Complete dental exam and full mouth series of radiographs
3. Prophylaxis with scaling and root planing if necessary
4. Extraction of all teeth with hopeless or guarded prognosis, such as teeth with severe periodontal disease
5. Endodontic treatment
6. Restoration of caries, fractures, etc.
7. Asymptomatic periapical radiolucencies s/p RCT do not have to be treated unless the radiolucency has increased in size as proven by serial radiographs.
8. Fixed and removable prostheses can be deferred until after transplantation. Only necessary dental treatment to eliminate pathology is required before transplantation.

B. CARDIAC VALVE PATIENTS

Patients who require cardiac valve replacement often do not have time before their surgery to undergo comprehensive dental evaluation and treatment. In some cases patients may not have seen a dentist for several years. Therefore the objective of pre-cardiac valve dental treatment is to eliminate active and potential sources of infection. Keep in mind that cardiac valve replacement patients are generally advised by their cardiologists not to seek routine, non-emergent dental



care for at least three months after cardiac surgery. Whether you see the patient as an inpatient or outpatient, follow the guidelines below:

1. Consult with the patient's physician concerning the patient's medical status, ability to tolerate dental treatment, and ability to travel via wheelchair to the Oral Medicine and Dentistry clinic if the patient is seen as an inpatient.
2. Because we are mainly concerned with acute infection before valve replacement, a bedside exam is typically sufficient for evaluation.
3. If the bedside exam reveals evidence of acute periapical infection or acute symptomatic teeth, then a radiograph should be obtained at bedside with a portable machine. Extraction should be recommended for teeth with acute odontogenic infection.
4. Antibiotic prophylaxis is required for dental treatment.
5. There may be instances where the patient is too ill to receive any dental treatment. Discussion with the patient's physician concerning the risks and benefits of dental treatment or deferring of dental treatment is mandatory. Each case will be different.

C. HEAD AND NECK CANCER PATIENTS

There is generally a short window of time to complete the necessary work up and dental treatment for patients who will start radiation/chemotherapy/surgery for head and neck cancer. It is critical that these patients be **evaluated as soon as a request is made for a dental evaluation, even if this means that other patients must be moved in the clinic schedule.**

The dental evaluation and treatment should include:

1. Full review of PMH and labs as needed.
2. Consult with the MD about the plan for treatment of the cancer (single or multi-modality treatment, expected start date of cancer treatment, maxilla or mandible in the field of radiation, dose of radiation, etc.) In a patient undergoing radiation therapy, the radiation oncologist must be contacted if simulation plans have already been completed and the dental treatment plan includes any extractions. Extractions may alter the plan and the patient may need to be re-simulated resulting in potential treatment delays.
3. Explanation to the patient of the role of dental health and potential oral complications in cancer treatment. Include in your discussion:
 - a. Ablative Surgery – functional compromise (speech, occlusion, swallowing, nutrition, saliva control), esthetic compromise, possible need for surgical stent, obturator, or other prostheses
 - b. Chemotherapy – mucositis, neutropenia and infection, thrombocytopenia and bleeding, altered taste sensation, odontalgia
 - c. Radiation Therapy – xerostomia, mucositis, altered taste sensation, radiation caries, osteoradionecrosis
4. Complete dental exam and full mouth series of radiographs. A panoramic radiograph is NOT adequate for these patients.
5. Prophylaxis, scaling and root planing, oral hygiene instruction
6. Extraction of all teeth with a hopeless or guarded prognosis, including:
 - a. Partially erupted teeth
 - b. Teeth with moderate to severe periodontitis
 - c. Root tips
 - d. Teeth with severe caries or periapical pathology. Endodontic treatment is generally not preferred because of time limitations and the possibility of treatment failure.



THE THRESHOLD FOR EXTRACTION IN THESE PATIENTS MUST BE LOW. TREATMENT IS AGGRESSIVE RELATIVE TO OTHER PATIENTS.

7. Restore caries/fractures/defective restorations
8. Replace, marginate, or extract all restorations that may cause soft tissue irritation
9. Remove orthodontic appliances
10. Relieve areas of irritation on ill-fitting prostheses
11. Fluoride trays with 0.4% stannous fluoride or 1.1% neutral sodium fluoride for 5 min. qhs to be used for life.

Management During and After Cancer Therapy

1. Soft tissue infections – antibiotics, antifungals
2. Mucositis – sucralfate, kaopectate/Benadryl/lidocaine, miracle mouthwash
3. Xerostomia – water, saliva substitutes, Biotene, pilocarpine, cevimeline
4. Diet – noncariogenic
5. Altered taste sensation – spicy foods
6. Fluoride trays forever
7. Follow up visits every 2-3 months
8. Consider root canal therapy instead of extraction. Extractions post-XRT are best done during the hyperemic stage within 5 months of radiation. Thereafter, the risk of ORN increases with time. *HBO therapy is generally NOT recommended due to insufficient evidence for efficacy and associated time/costs. This should be considered on a case-by-case basis with involvement of the radiation oncologist.*

D. CHEMOTHERAPY PATIENTS

Guidelines for managing high-dose chemotherapy patients are generally the same as for managing HSCT patients.



OFF-SITE PRE-HSCT DENTAL SCREENING PROGRAM

As part of the “off site” pre-hematopoietic stem cell transplantation (HSCT) dental evaluation for patients about to undergo hematopoietic cell (bone marrow) transplantation, dentists are provided standard evaluation forms to complete and return to our office, together with radiographs taken. By reviewing private dentists' evaluations, we are helping to guide them in preparing patients for HSCT. As necessary, residents will speak with the private dentists to confirm or discuss treatment plan issues. Residents will also write a letter to the outside dentist documenting our recommendations on a template. Please do these evaluations in a timely fashion – they add up quickly and time is often short if the patient requires dental treatment.

KEEP IN MIND, THE PURPOSE OF THESE EVALUATIONS IS TO ELIMINATE AREAS OF ACTIVE OR POTENTIALLY ACTIVE INFECTION. IN MOST CASES, THE TREATMENT PLAN SHOULD NOT BE ANY MORE AGGRESSIVE THAN HOW AN OTHERWISE HEALTHY PATIENT WOULD BE OPTIMALLY MANAGED. IN SOME CASES, WHEN PATIENTS HAVE NOT HAD ROUTINE CARE, OR QUESTIONABLE TEETH HAVE BEEN “WATCHED” FOR AN EXTENDED PERIOD OF TIME WITHOUT DEFINITIVE CARE, MORE EXTENSIVE TREATMENT WILL BE RECOMMENDED.

The work flow is as follows:

1. Evaluations and radiographs from the local dentist are delivered on a daily basis to the BWH resident. Yadira Borrero manages the practice e-mail where the evaluations and radiographs are received in the practice.
2. Resident completes initial review of the evaluation and radiographs and contacts dentist for any missing or incomplete information such as dates of procedures that should have been scheduled but that may not have been documented.
3. Resident reviews chart and radiographs and fills out letter template to local dentist called “BMT Dental Letter” in EPIC. Resident saves as preliminary in EPIC until the treatment plan and letter is reviewed with the attending and finalized in EPIC. The resident enters the dentist's information and address prior to review with the attending. The attending prints the letter once it is finalized and it is mailed back to the dentist. **Any communications with the dentist requiring immediate action or a substantial alteration in treatment plan must first be discussed with the attending as soon as possible; this can typically be completed by email or telephone. All correspondences must be summarized and documented in EPIC and included in the letter.**
4. The resident and attending meet at least once a week for sign-out rounds. The time and location will vary depending on the attending's schedule.

REVIEW GUIDELINES

A folder with the private dentist's evaluation and radiographs will be given to you. Look in EPIC to check the patient's diagnosis and oncologist's name (DO NOT rely on the private dentist's paperwork for this information). If there is any outstanding dental treatment needed or a treatment plan that is questionable, it is critical that the resident contact the dentist to discuss the issues. All such discussions should be documented at the bottom of the dentist's evaluation form.



The purposes of our letter to the private dentists are to check and acknowledge the private dentist's findings and to concur with/alter/add to the treatment plan. Specific instructions on how to write your letter to the private dentist using the template are provided after the next section.

OFF-SITE PRE-RADIATION DENTAL SCREENING PROGRAM (PRE-H&N CANCER THERAPY)

As part of the "off site" pre-radiation dental evaluation for patients about to undergo chemoradiation therapy for head and neck cancer, dentists are provided standard evaluation forms to complete and return to our office, together with radiographs taken. By reviewing private dentists' evaluations, we are helping to guide them in preparing patients for the short- and long-term complications of head and neck cancer therapy. As necessary, residents will speak with the private dentists to confirm or discuss treatment plan issues. Residents will also write a letter to the outside dentist documenting our recommendations on a template in the electronic medical record. Please do these evaluations in a timely fashion – they add up quickly and time is often short if the patient requires dental treatment.

KEEP IN MIND, THE PURPOSE OF THESE EVALUATIONS IS TO ELIMINATE AREAS OF ACTIVE OR POTENTIALLY ACTIVE INFECTION AND PREPARE THE PATIENT FOR THE LONG-TERM CONSEQUENCES OF RADIATION THERAPY LIKE HYPOSALIVATION AND RISK FOR OSTEORADIONECROSIS. IN MOST CASES, THE TREATMENT PLAN SHOULD NOT BE ANY MORE AGGRESSIVE THAN HOW AN OTHERWISE HEALTHY PATIENT WOULD BE OPTIMALLY MANAGED. IN SOME CASES, WHEN PATIENTS HAVE NOT HAD ROUTINE CARE, OR QUESTIONABLE TEETH HAVE BEEN "WATCHED" FOR AN EXTENDED PERIOD OF TIME WITHOUT DEFINITIVE CARE, MORE EXTENSIVE TREATMENT WILL BE RECOMMENDED.

The work flow is as follows:

1. Evaluations and radiographs from the local dentist are delivered on a daily basis to the BWH resident. Yadira Borrero manages the practice e-mail where the evaluations and radiographs are received in the practice. Sometimes the materials will come in the interdepartmental mail from the DFCI H&N Oncology Group. They like to refer to the evaluation materials as the "DIG" or Dental Instructional Guide.
2. Resident completes initial review of the evaluation and radiographs and contacts dentist for any missing or incomplete information such as dates of procedures that should have been scheduled but that may not have been documented.
3. Resident reviews chart and radiographs and fills out letter template to local dentist called "H&N Dental Letter" in EPIC. Resident saves as preliminary in EPIC until the treatment plan and letter is reviewed with the attending and finalized in EPIC. The resident enters the dentist's information and address prior to review with the attending. The attending prints the letter once it is finalized and it is mailed back to the dentist. **Any communications with the dentist requiring immediate action or a substantial alteration in treatment plan must first be discussed with the attending as soon as possible; this can typically be completed by email or telephone. All correspondences must be summarized and documented in EPIC and included in the letter.**
4. The resident and attending meet at least once a week for sign-out rounds. The time and location will vary depending on the attending's schedule.

REVIEW GUIDELINES



A folder with the private dentist's evaluation and radiographs will be given to you. Look in EPIC to check the patient's diagnosis and oncologist's name (DO NOT rely on the private dentist's paperwork for this information). If there is any outstanding dental treatment needed or a treatment plan that is questionable, it is critical that the resident contact the dentist to discuss the issues. All such discussions should be documented at the bottom of the dentist's evaluation form.

The purposes of our letter to the private dentists are to check and acknowledge the private dentist's findings and to concur with/alter/add to the treatment plan. Specific instructions on how to write your letter to the private dentist using the template are provided below.



BMT/ HEAD AND NECK LETTERS PROTOCOL

General instructions

Follow the format of the letter as it appears in EPIC, this protocol will serve as a guide

Ensure all the responses you write are aligned and uniform, with adequate spacing.

Please note: We are concerned only about teeth that are at a risk of being **acutely infected during transplantation and for about 3 months after**. Always ask yourself if the tooth poses a risk. If there is a finding that poses little to no risk e.g. impacted third molar in 55 year old with no history of pericoronitis, you will note the impacted tooth, but no treatment is necessary. Another example is crown fabrication for a very large 5-surface amalgam restoration on a stable, asymptomatic tooth can be deferred.

Letter	Explanation
DATE	Write the “Date” on which you get the letter signed, ensure you also change the date of the note in EPIC
Dr. Dentist’s Name Street City, State 12345	Fill in First and Last name of the dentist Street/ PO box/ Suite City/ State
Re.: Patient Last, First DOB: __/__/__	Re.: Patient Last, First DOB: __/__/__
Dear Dr. _____,	Dear Dr. Last name



<p>Thank you for sending the dental evaluation and radiographs on Mr/s. _____ . This patient’s medical record and radiographs were reviewed in consultation at the request of Dr. Oncologist in preparation for hematopoietic stem cell transplantation/H&N cancer treatment</p>	<ul style="list-style-type: none"> • Include patient’s full name • Identify the Oncologist using EPIC • This is a good time to add the dentist to the cc list In addition, for H&N letters, include Josie Stephens in the cc and choose the option to email the letter to her
<p>Diagnosis:</p> <p>Radiographs received:</p> <p>FMX dated _/_/___</p> <p>Panoramic dated _/_/___</p>	<ul style="list-style-type: none"> • Identify the diagnosis from EPIC. Keep in mind that patients with multiple myeloma might be on bisphosphonates and are at risk for osteonecrosis if they have extractions • Write the date when the FMX was taken • Radiographs should be taken within 6 months, if that is not the case please contact the dental clinic and ask them to send it ASAP. This may not be necessary if the patient has very healthy dentition – check with the attending • FMX contains 12-14 periapical radiographs and 4 bitewings. If BWs are missing or there are substantial numbers of periapical films missing, do not call it as a “FMX”. Write the # of periapicals/# bite wings. • Write the dates of all radiographs if multiple sets were sent. • If the tooth periapical area is missing on PA, and you are not able to obtain a new one, please indicate in the letter along with tooth or teeth #(S) if appropriate – the attending can help with this.
<p>Pertinent findings from clinical and radiographic examination:</p> <p>a) caries:</p> <p>b) endodontically-treated teeth:</p> <p>c) apical pathology:</p>	<p>If you spoke with the dentist, please write as the last phrase in the opening sentence, “...and for speaking with my resident, Dr. XY”.</p> <p>Before you start to fill this part of the letter, always look at the radiographs first. Make a note of all findings by yourself, and then verify with what the dentist has noted in the evaluation form. Always call the dentist to clarify when in doubt.</p> <p>a) Caries:</p>



<p>d) periodontal bone loss:</p> <p>e) third molars:</p> <p>f) others:</p>	<ul style="list-style-type: none"> • Write “Caries noted on #X and #Y” if you see them. • If you do not see the caries but the dentist has noted it, then write: “You noted caries on #19 O.” Occlusal and Class V caries, recurrent caries, or buccal and lingual pit caries are difficult to see on radiographs only. • If you notice opacities overlying the pulp chamber it is most likely a buccal composite, but always contact the dentist to reconfirm especially if notice a radiolucency in relation to it. • If you think that a particular tooth might be carious which the dentist did not notice, write “Caries noted on #X, #Y (?)”. This will show up as “Please re-evaluate tooth #Y and treat as necessary.” in the Treatment Plan. <p>b) Endodontically- treated teeth:</p> <ul style="list-style-type: none"> • Note down all teeth that have had RCT and see if the seal looks good and cross check with the write up to see if any teeth are symptomatic. If the canals look reasonably filled and are asymptomatic, write: “Teeth #X and #Y are well-sealed and asymptomatic.” • Please check for any widening of PDL or radiolucency and move onto the next section <p>c) Apical pathology:</p> <ul style="list-style-type: none"> • For teeth with RCT, note the size of any apical pathology and note if symptomatic or not. If < 5 mm and asymptomatic, write: “There is a X mm radiolucency at the apex of #Z that is asymptomatic; this likely represents a scar”. If > 5 mm and asymptomatic, write “There is a Y mm radiolucency at the apex of tooth #Z that is asymptomatic; this may represent a scar, granuloma or radicular cyst.” You will note in the Treatment Plan that this tooth needs to be followed up after discharge. • If the tooth does NOT have a RCT and has a periapical radiolucency, call the dentist and get it pulp tested, it is probably necrotic. Hopefully, the dentist already noted this and has already pulp tested it. Make sure the attending helps you with such cases. Multi-rooted teeth may test positive for vitality but still be partially necrotic in one root. <p>d) Periodontal bone loss:</p> <ul style="list-style-type: none"> • Use bitewings to identify amount of bone loss. Normal bone height is within 1-2 mm of the CEJ. Note if it is generalized or localized and specify which teeth are involved. Is it horizontal or vertical?
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	<p>Insignificant bone loss: when bone loss is minimal</p> <ul style="list-style-type: none"> • <u>Mild bone loss</u>: when the alveolar bone level is 3 to 4 mm from the CEJ or bone loss is less than 1/3 the length of the tooth root • <u>Moderate bone loss</u>: when the alveolar bone level is 4 to 6 mm from the CEJ or bone loss is 1/3- 1/2 the length of the tooth root • <u>Severe bone loss</u>: when the alveolar bone level is >6 mm from the CEJ or bone loss is more than 1/2 the length of the tooth root • If the dentist has noted teeth with > 4mm pockets, write “You noted > 4 mm pockets associated with teeth #X and Y.” • Note furcation involvements. <p>e) Third molars:</p> <ul style="list-style-type: none"> • If present, note if it is full bony impacted, partially bony impacted, soft tissue impacted, or fully erupted • Check the write-up for erupted teeth to see where the distal gingiva is located since this is where food impaction and pericoronitis often originates. • Note the missing third molars: “Tooth #1 and #16 are full bony impacted, #17 is soft tissue impacted and #32 is absent.” <p>f) Others:</p> <ul style="list-style-type: none"> • Include any other information given by the dentist or that you identify (if relevant) which do not fall into the above categories • These can include implants (indicate if periimplant radiolucency is present or not), fractured teeth (note surface of tooth/teeth involved), condensing osteitis, retained root tips
<p>Treatment Plan:</p> <ol style="list-style-type: none"> 1. Scaling and prophylaxis were completed on (date) 2. (Put in other dental needs here) 3. (Reminder - Myeloma precautions as necessary) 	<ul style="list-style-type: none"> • Scaling and prophylaxis need to be completed within 3 months prior to admission and the date when this was completed, or when it has been scheduled for, should be inserted. • If the dentist has not included it, call the practice and find out the date. If unable to confirm date of last S/P, write: “Please perform scaling and prophylaxis as soon as possible if this has not been completed within the last three months.” • Write down the treatment plan and date completed or scheduled such as “Teeth #X and #Y were restored (or are scheduled for restoration) on XXX”. It is often a good idea to call to see if the treatment has been completed as opposed to scheduled. Or you can write “Please restore #X (or perform root canal therapy, or extractions) as soon as possible”. • If any other tooth or teeth need re-evaluation or treatment, include it in this part of the letter. Eg. “Please re-evaluate tooth #Y and treat as necessary” if you had a question about that tooth • If extraction is needed for a patient with multiple myeloma, include



	<p>myeloma precautions in this section. Contact oncology nurse to find out if the patient is on IV bisphosphonates (you can check on EPIC too and note total of doses received). Speak with your attending about the safety of doing such extractions and write the total dose and bisphosphonate used in this section and whether you agree with the extraction. In such cases, it is always a good idea to call.</p>
<p>Thank you for helping to prepare Mr/s. _____ for stem cell transplantation. There are no other immediate dental needs</p>	<ul style="list-style-type: none"> • Write this when no additional treatment is needed.
<p>When treatment has been completed, please fill out and return the attached Treatment Plan form in the addressed envelope. Thank you for helping to prepare Mr/s. _____ for stem cell transplantation.</p>	<ul style="list-style-type: none"> • Include this line if there is any pending treatment plan. Add the treatment plan paragraph (available in EPIC) at the end of the letter. • Include entire name of the patient <p style="text-align: center;">TREATMENT PLAN:</p> <p>1. Scaling and prophylaxis to be completed within the last 3 months: change this according to the treatment needed e.g.- Restoration of #X.</p> <p><input type="checkbox"/> Treatment was completed on:</p> <p><input type="checkbox"/> Treatment was not completed; reason:</p>
<p>Signature of attending</p>	<p>Include treatment plan paragraph after the signature as mentioned above</p>



ORAL MEDICINE CLERKSHIP

The objective of this clerkship is to train residents to proficiency in the clinical practice of Oral Medicine, including:

- history taking
- proper use and interpretation of microbiology, histopathology, radiography and laboratory studies
- diagnosis and management of oral mucosal and salivary gland diseases
- anticipation, prevention, identification, and management of cancer-related orofacial complications
- recognition and management of orofacial pain disorders
- treatment planning for, and delivery of optimal oral health care for the medically complex patient

All patients are seen in the *Division of Oral Medicine and Dentistry* outpatient clinic at BWH (2nd floor, or "Pike", Exit 3). Residents must check the schedule *prior* to the clinic session and review all available EPIC notes for returning patients. Just prior to seeing each follow-up patient, the resident will briefly present their history to the attending:

- concise clinical summary
- treatments, outcomes
- pertinent laboratory reports

In most cases, **new patients will initially be evaluated by the resident.** The resident will write the clinical notes in EPIC (using the correct templates and entering meaningful use fields taught in EPIC training) and forward to the attending for review and finalization.

Residents must ensure that the names and addresses of all referring physicians and dentists have been entered by the assistants. The resident must enter the referring doctors in EPIC (taught during EPIC training). In case of missing information, if the patient does not have their dentist's address, it can typically be found easily by searching the [dentist's last name], the word [dentist], and the [name of the town] in Google. Note that all dentists' information are entered into the CC function manually by the dental assistant, whereas nearly all physicians are already in the database. This must be completed prior to forwarding notes to the attending for review.



The **Orofacial Pain Clerkship** is incorporated into the second Oral Medicine block. Residents rotate at MGH Orofacial Pain Clinic on the 2nd and 4th Wednesday afternoons and every Thursday afternoon. Below are the schedules for the Oral Medicine and combined Oral Medicine/Orofacial Pain Clerkships:

Oral Medicine/Orofacial Pain

	M	T	W	TH	F
AM	Woo	Sankar	Sankar (1 st & 3 rd) Villa (2 nd , 4 th , 5 th)	Treister	Treister*
PM	Villa/Woo (Shaefer MGH)**	Villa/Sankar		Shaefer/Scrivani (MGH)**	Villa

Oral Medicine

	M	T	W	TH	F
AM	Woo	Sankar	Sankar (1 st & 3 rd) Villa (2 nd , 4 th , 5 th)	Treister	Treister*
PM	Villa/Woo	Villa/Sankar		Treister	Villa

*First Friday of the month residents attend the HSCT Survivorship Clinic at DFCI with Dr. Villa.

**Subject to change based on MGH availability.



OTOLARYNGOLOGY CLERKSHIP OBJECTIVES

We expect all of our providers, including students, to show up on time for their scheduled sessions with appropriate attire and hospital identification. It is most helpful if you have read the educational information prior to beginning the rotation. This will vastly increase your ability to participate and learn from your patient interactions.

We designed this clerkship so that you can be involved with both *ambulatory otolaryngology*, where you will work directly with a faculty preceptor on taking the histories and performing ear and neck portions of the physical exam, as well as *operative experience* so that you can see the unique anatomy of the head and neck. Because many of us are subspecialists, e.g. otology or head and neck, we do not want you to spend the entire rotation with just one faculty member. We realize that this has the disadvantage of one faculty not getting to know you well, but the advantage of getting a more broad exposure of our specialty seems to outweigh this other consideration.

We also want to give you some flexibility in your choice of how to spend each day. The chief resident will give you a schedule, but if you find that there is a specific operative case or clinic experience that you wish to substitute to achieve your personal or course objectives please let the Chief Resident or appropriate faculty member know so that we can facilitate your learning.

BEFORE YOUR ROTATION STARTS: Please make contact with the Chief Resident no later than the Friday before your first day.

IMPORTANT PHONE NUMBERS:

Lynn Kepnes Nurse Practitioner, Outpatient Clinic 617-791-2280

Robyn Gabriel Administrative Director, Division 617-525-6531

A number of office, emergency, and non-surgical conditions falls in the purview of ORL. Over the course of the clerkships, students will be expected to become familiar with the diagnosis, triage and management of the following:

- Emergency/Trauma
 - Airway obstruction
 - Epistaxis
 - Craniofacial, Cervical and Laryngeal fractures and soft tissue injury
 - Head trauma
 - Acute infections, including deep neck
 - Foreign bodies and caustic ingestion

- Infections of Head and Neck Sites
- Neoplastic Diseases and Mass Lesions of Head and Neck Sites
 - Benign; Malignant
 - Congenital masses/cysts
 - Tumor-like conditions



- Non-neoplastic and inflammatory Conditions of Head and Neck Sites
 - Acute; Chronic
- Oral mucosal diseases and related dentistry
- Voice, Speech and Swallowing Disorders and Rehabilitation
- Sleep Disorders

Knowledge

Ear

1. Differentiate between sensorineural and conductive hearing loss.
2. Differentiate an acute otitis media from an otitis media with effusion from an otitis externa; recognize the complications of each (mastoiditis, hearing loss).
3. Understand the evaluation of a patient with dizziness, including details of the history that help distinguish various etiologies of dizziness (Menière's disease, acoustic neuroma, vestibular neuritis, labyrinthitis).
4. Know the indications for tympanocentesis, myringotomy and tube placement.
5. Know the differential diagnosis for otalgia and pertinent historical and clinical findings.
6. Know how to interpret an audiogram and the functional consequences of hearing loss in different frequency ranges.

Nose and Sinuses

1. Know the symptoms, common causes and treatment options for rhinitis and eustachian tube dysfunction.
2. Differentiate anterior from posterior epistaxis, including the treatment options for each.
3. Know the signs and symptoms of infectious vs. inflammatory sinusitis and possible complications.
4. Know the indications and basic anatomic principles of endoscopic sinus surgery.
5. Know and be able to demonstrate normal and abnormal findings on sinus CT.

Oral Cavity and Oropharynx

1. Differentiate a peritonsillar abscess from tonsillitis.
2. Be able to identify leukoplakia of the oral cavity.

Larynx

1. Know the differential diagnosis and evaluation of a patient with hoarseness.
2. Know the basic evaluation of a patient with dysphagia.
3. Demonstrate command of the basics of airway management, anatomic landmarks and be able to identify airway emergencies (e.g., supraglottitis).
4. Be familiar with the differential diagnosis of stridor.

Salivary Glands

1. Understand the diagnosis and treatment of sialolithiasis and parotitis.

Neck

1. Know the differential diagnosis and basic evaluation of a neck mass, including a thyroid nodule.
2. Know basic neck anatomy on neck CT scan.



Skills

Clinic

1. Be able to examine the ear, including the auricle, ear canal and tympanic membrane.
2. Be able to perform a thorough neck examination with particular attention to identifying the cricoid cartilage. Be able to fully describe the location and characteristics of a neck mass or adenopathy.
3. Take a focused history from a patient in an ambulatory setting. Be able to establish a rapport with the patient during the visit.

Operating Room

1. Be able to demonstrate knowledge of sterile technique and function safely in sterile environment.
2. Be aware of operating room routines and the beginning and end of cases and facilitate those routines when involved in a surgical procedure.
3. Know and be able to demonstrate relevant anatomy for the cases assigned.

Attitudes

1. Demonstrate awareness of functional impairments that might affect ORL patients.
2. Be able to discuss the impact of ORL disease on a patient's quality of life.
3. Be mindful of each patient's sense of his/her disease and assess his/her understanding of the proposed treatment plan.

EDUCATIONAL MATERIALS

In addition, some of your learning will need to be independent. In this way, you can benefit more deeply from the actual patient experiences during your time with us. It will enhance your learning experience if you read the brief handbook entitled: Primary Care Otolaryngology. You may find this publication online:

<http://www.entnet.org/EducationAndResearch/primaryCare.cfm>

In addition, we recommend that you work through the web-based curriculum (COOL) at:

<http://www.entnet.org/EducationAndResearch/COOL.cfm>

Required Reading Prior to Beginning the Rotation:

Lalwani A. Current Diagnosis and Treatment in Otolaryngology – Head & Neck Surgery. 2nd ed. McGraw-Hill, New York, 2008 (a copy is available to borrow prior to and during the rotation)

Recommended Reading:

1. Becker W. Ear, Nose, and Throat Diseases – A Pocket Reference. 2nd rev. ed. Thieme Publ, New York, 1994.
2. Pasha R. Otolaryngology: Head and Neck Surgery – A Clinical and Reference Guide. 2nd ed. Plural Publ, 2006.
3. Seiden A. Otolaryngology - The Essentials. Thieme Publ, New York, 2002.



4. Lee KJ. Essential Otolaryngology. 8th ed. McGraw-Hill Publ, New York, 2003.
5. Fitzpatrick TB. Clinical Dermatology-Color Atlas & Synopsis. 5th ed. McGraw Hill Publ, New York, 2005.
6. Martin FN, Clark, JG. Introduction to Audiology. 9th ed. Pearson Allyn and Bacon Publ, Boston, 2006.

TYPICAL WEEKLY SCHEDULE (can be flexible based on specific interests):

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	BWH Outpatient Clinic	H&N Oncology Clinic, DFCI Y11	Tumor Board (7-8am, DFCI) Oral Medicine Seminar/Grand Rounds when scheduled BWH Outpatient Clinic	BWH Outpatient Clinic	OR: H&N Oncology
12-1			Swallowing Grand Rounds		
PM	BWH Outpatient Clinic	H&N Oncology Clinic, DFCI Y11	H&N Oncology Clinic, DFCI Y11	H&N Oncology Clinic, DFCI Y11	BWH Outpatient Clinic



DERMATOLOGY CLERKSHIP OBJECTIVES

1. Fluency in basic descriptive dermatological terminology (macule, papule, vesicle, etc)
2. Recognition of the most common or serious dermatoses, and those with significant oral manifestations:

Acne	Atopic dermatitis	Herpes simplex and zoster	Contact dermatitis
Warts	Seborrheic dermatitis	Impetigo	Fungal infections
Psoriasis	Seborrheic keratosis	Tinea versicolor	Pityriasis roseas
Actinic keratosis	Pigmented lesions (nevi)	Lichen planus	Urticaria
Basal cell carcinoma	Alopecia	Malignant melanoma	Squamous cell carcinoma
			Vesiculobullous disorders

3. Recognition of important cutaneous reactions and markers of syndromes (erythema multiforme, erythema nodosum, GVHD, etc)
4. Familiarity with cutaneous signs of systemic disease, particularly collagen vascular and malignant diseases
5. Ability to perform:
 - KOH preparations
 - Scabies preparations
 - Wood’s lamp exams
 - Tzanck smears
 - Punch biopsies

6. Familiarity with the basic principles of dermatological therapeutics

7. Recommended Readings:

- A. Freedberg I, Eisen A, Wolff K., et a., Fitzpatrick’s Dermatology in General Medicine, 5th ed., New York: McGraw-Hill (1999). Chapters 4, 5, & 6
- B. Lookingbill DP, Marks JG., Principles of Dermatology, 4th ed., Philadelphia: WB Saunders Co. (2006) 331 pages
- C. Arndt KA., Manual of dermatologic therapeutics, 5th ed., Boston: Little, Brown & Co. (1995)
- D. Fitzpatrick TB, Johnson RA, Polano MK, Surmond D, Wolff K., Colors Atlas and Synopsis of Clinical Dermatology, 3rd ed., New York: McGraw-Hill (1997)

8. **Required Readings:** papers are uploaded in the ecommons under *My Collaborations > Oral Medicine Clinical Rotations > Dermatology*.

Conference Schedule (mandatory attendance, times/locations subject to change):

- Monday:** 7:45-8:30 am, Journal Club, BIDMC-East, Trustman Boardroom
- Tuesday:** 7:45-10:00 am, MGH Grand Rounds
7:45-8:25 am, MGH, TBF Conference Rm. 50 Staniford Street, floor G1 (patient viewing)



8:30-10:00 am, Wellman conference Room (case discussion)

Wednesday: 9:00-10:30 am, Chief Resident Lecture, MGH, Wang Acc 477, Tolman Library or BWH Dermatology Conference Rm., 221 Longwood Ave., 1st floor

Thursday: 4:30-6:30 pm, Longwood Walk Rounds, BIDMC-East Campus
 4:30-5:00 pm, Shapiro Clinical Center (patient viewing)
 5:10-6:00 pm, Pathology Conference Room

Dr. Nandi has clinic at 221 Longwood on Monday afternoon (Immunobullous), Wednesday morning (mostly Gen Derm), and Wednesday afternoon (mostly Gen Derm).

	Monday	Tuesday	Wednesday	Thursday	Friday
AM Session	General Derm	Pigmented Lesion Clinic, Dr. Lin or Gen Derm	<i>Oral Med Obligations – not scheduled in Derm</i>	Varies – skin toxicities or Merkel cell	GVHD, Dr. Liu, DFCI
PM Session	Bullous, Dr. Nandi	Gen Derm	Gen Derm, Dr. Nandi	Wound or gen derm	Melanoma, Dr. Lin, DFCI



RHEUMATOLOGY, ALLERGY & IMMUNOLOGY CLERKSHIP

The subspecialty of rheumatology includes a wide array of autoimmune, inflammatory, and degenerative diseases that affect the musculoskeletal and other organ systems, including the orofacial complex. A working knowledge of the basic and clinical sciences that relate to musculoskeletal and rheumatic disease is fundamental to the practice of oral medicine. The objective of this two-week rotation is to gain a working knowledge of clinical rheumatology, with respect to history taking, physical examination, ordering and interpretation of laboratory and imaging tests, diagnosis, management, and follow-up.

One week is devoted primarily to the consult service. The second week is spent in the outpatient clinic. Some exposure to pediatrics is provided.

Didactics & Seminars

Grand Rounds

Tuesdays 8-9, Bayles Conference Room

Lunch Rounds

Tuesday 12-1, Bayles Conference Room



EMERGENCY ORAL MEDICINE & DENTISTRY SERVICES

The Emergency Oral Medicine and Dentistry Service of Brigham & Women's Hospital (BWH) is administered through the Division of Oral Medicine and Dentistry, in conjunction with the Department of Emergency Medicine (ED). The goals of the service are to provide: 1) emergency dental care to the community; and 2) dental care and consultation services to in-patients.

The Emergency Oral Medicine and Dentistry Service is committed to meet the needs of patients whenever possible. However, the major objective of the service is for the relief of pain and management of acute infections.



ON-CALL SCHEDULES

The On-Call schedule is created at the beginning of the academic year by the chief resident, program coordinator and Program Director. Any changes can be made among residents and the program coordinator must be informed in advance.

The final on-call schedule may vary slightly depending on the total number of residents in the program in any given year. The following three schedules represent years with no, one, or two *combined Certificate/Degree tracks* residents included in the on-call schedule. These schedules are best estimates and subject to changes by the Program Director.

AVAILABILITY OF THE ON-CALL RESIDENT

The on-call resident is required to be within a 15 minute travel distance from the hospital when on call. Residents can be reimbursed for cab fare for travel from home to hospital and back if they are called in to the ED at night. The BWH Oral Medicine and Dentistry service shares a call room with the NICU in CWN 6, Room 648.6. Your badge will give you access. If the room is already occupied, you will need to stay in the Oral Medicine and Dentistry clinic or go home.

FAILURE TO BE AVAILABLE FOR SCHEDULED COVERAGE IS GROUNDS FOR DISMISSAL.

For BWH ED COVERAGE, residents are to be available (on page) according to the following schedule:

- M, T, W, and Th – 5:00pm to 5:00am
- Fri - 5pm to 8am Saturday
- Sat – 8am to 8am Sunday
- Sunday – 8am to 5am Monday

Weekday holiday coverage hours depend on whether there is a workday just before or just after the weekday holiday. For example, for a Monday holiday, the Sunday person would cover until 8am Monday and the Monday person would cover until 5am Tuesday. For a Friday holiday, the Thursday person would cover until 8am Friday and the Friday person would cover until 8am Saturday. **UNDER NO CIRCUMSTANCES ARE ON-CALL RESIDENTS TO MAKE THEMSELVES UNAVAILABLE BEFORE THE END OF THEIR SHIFT, OR, IN THE CASE OF WEEKENDS AND HOLIDAYS, BEFORE THE SUCCEEDING RESIDENTS HAVE ASSUMED RESPONSIBILITY.**

“A” Rotation/Oncall Coverage

1. If the A resident is paged on their time (5 am - 5 pm), they must see this page/consult and complete the consult before the end of their shift. If the on-call resident gets paged on their time (5 pm - 5 am), they must see this page/consult and complete the consult before the end of their shift.
2. It is the responsibility of the A resident to address all pages/consult prior to 5 pm. Any outstanding consults should be communicated with the primary team about when the patient will be seen next (e.g., in the next hour or the next morning etc...).
3. Any pages/consults that the night on-call resident receives that are non-urgent can be seen by the A resident. It is the responsibility of the on-call resident to communicate this to the A resident. If the resident on-call sees a patient who requires a follow up the following day he/she should communicate with the A resident and the preceptor.



PATIENT FLOW

Generally, patients who present to the ED are first triaged by the nurse and then assessed by the on-call attending ED physician, who will then request a dental consult as needed. The patient's record is generally filed in a bin according to the patient's assigned exam room number. The patients are to be examined by the Oral Medicine resident in the ED, using the exam room provided for that purpose. Unless a patient has a serious condition, patients are to be treated in the order in which they arrive. **KEEP IN MIND THAT THE PATIENT IS THE PATIENT OF THE ED PHYSICIAN AND YOU ARE THE CONSULTANT.** Therefore, the on-call Oral Medicine resident is to examine the patient, provide a diagnosis, inform the ED physician, and treat the patients with the consent of the ED physician. For patients who have complex multi-disciplinary needs or who need admission to the hospital for either trauma or infection, the ED physician must be consulted. If admission is needed, the on-call plastic surgery or ENT resident will be contacted to do the admission. The Division of Oral Medicine and Dentistry does not have privileges to admit patients.

The on-call resident should feel free to contact the **on-call attending dentist** whenever the diagnosis or treatment of a patient is in question. Before contacting the attending dentist on call, the resident should have already reviewed the case, examined the patient, and considered possible differential diagnoses and courses of treatment.

Generally all dental treatment should be provided in the ED exam room. In the very rare situation where it is determined that the patient needs emergent dental care beyond the scope of what can be provided in the ED exam room, the patient may be brought up to the Oral Medicine clinic, accompanied by one of the ED physician care assistants (PCA's), or a BWH Security Officer, as appropriate. **UNDER NO CIRCUMSTANCES SHOULD A RESIDENT BRING A PATIENT TO THE CLINIC UNACCOMPANIED BY EITHER A PCA OR SECURITY OFFICER.**

When treatment is completed, the resident should review instructions with the patient. The resident should also inform the ED nurse and physician of any instructions. The patient will then be discharged by the ED physician.

DENTAL EQUIPMENT FOR THE ED

An ED dental equipment box is available to bring to the ED and is stored in the Oral Medicine and Dentistry clinic. **It is the responsibility of the Oral Medicine resident who uses it to return it to the Oral Medicine and Dentistry clinic and restock the supplies and equipment in the box.** This is critical as the next resident who needs it must be assured that whatever equipment is needed is available in the box.

PATIENT AGE

Brigham and Women's Hospital is an adult care facility. **Only patients 14 years of age or older are to be treated in the ED.** Patients 13 years of age or younger should be referred to Children's Hospital Boston for care.

INFORMED CONSENT

Patients admitted to the ED give a general consent for treatment when they register. The general consent covers most diagnostic and treatment procedures including routine I & D. However, for surgical procedures such as tooth extraction, written informed consent is to be obtained from the patient or legal guardian.



A parent or legal guardian must give consent for all patients under age 18 or adult patients who are judged to be unable to provide informed consent. Any questions regarding a patient's age or ability to provide informed consent should be discussed with the ED attending physician.

If the patient's condition is life-threatening and consent can not be obtained, a hospital administrator can authorize the necessary treatment. The case should be discussed with the ED attending-on-duty.

ADVICE OVER THE TELEPHONE

Telephone calls from patients wanting advice are to be handled in the following manner:

If the patient was seen during your shift and has a question regarding a prescription or instructions, the questions may be handled over the telephone. If the patient is a patient of the faculty AND you are able to consult with that attending about the case by phone, you may be able to give advice/call in a prescription with the advice of the faculty person. If the patient's condition is worse, the patient is to be instructed to come to the BWH ED immediately.

OTHERWISE, NO PRESCRIPTIONS OR ADVICE ARE TO BE GIVEN OVER THE TELEPHONE. IF PATIENTS CALL FOR ADVICE THEY ARE TO INSTRUCTED TO COME TO THE ED FOR CARE.

INPATIENT CONSULTS

If there is an acute oral problem with an inpatient, an on-call resident is to examine the patient and then contact the appropriate on-call attending dentist before any treatment is rendered. The on-call resident should provide full report of any consults to the resident assigned to the inpatient consult service, so that the patient can be appropriately followed on morning rounds during the week. If consults occur over the weekend, the on-call resident for Sunday should ensure that a report is given for all weekend consults so that the patients can be followed on Monday morning rounds.

PAGER INSTRUCTIONS FOR ED/INPATIENT CONSULT ON-CALL RESIDENT

There is one pager for the ED/inpatient consult coverage. It is **beeper #11560**. It is always physically carried by the A resident. However, when another resident is on-call for that night/weekend, s/he can forward calls from this beeper to his/her own beeper. IT IS THE RESPONSIBILITY OF THE RESIDENT COMING ON-CALL TO FORWARD CALLS FROM BEEPER 11560 TO HIS/HER OWN BEEPER. Below are instructions on how to forward calls from beeper 11560 to another beeper.

1. Type: <https://www.ppd.partners.org/ppd/login/login.asp?CTAuthMode=BASIC>

2. LOG IN



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AND MASSACHUSETTS GENERAL HOSPITAL

Partners Phone Directory

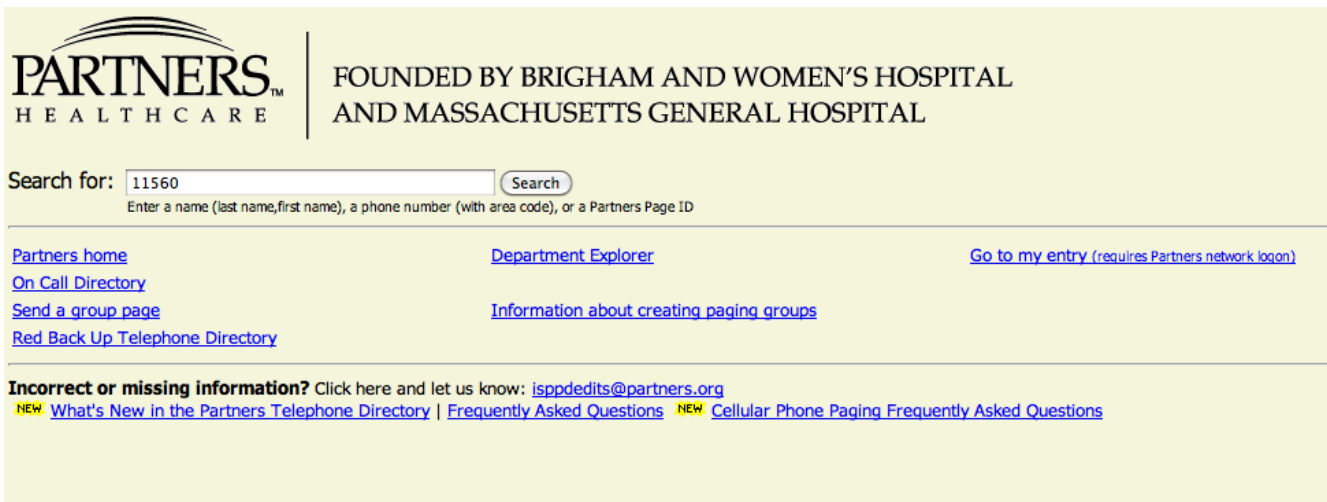
Enter your Partners ID and password.

Partners ID:

Password:


Go 

3. Type in 11560



The screenshot shows the Partners Phone Directory search interface. At the top, it features the Partners Healthcare logo and the text 'FOUNDED BY BRIGHAM AND WOMEN'S HOSPITAL AND MASSACHUSETTS GENERAL HOSPITAL'. Below this is a search bar with the text 'Search for: 11560' and a 'Search' button. Underneath the search bar, there is a small instruction: 'Enter a name (last name, first name), a phone number (with area code), or a Partners Page ID'. A horizontal line separates the search area from a list of navigation links: 'Partners home', 'On Call Directory', 'Send a group page', 'Red Back Up Telephone Directory', 'Department Explorer', 'Information about creating paging groups', and 'Go to my entry (requires Partners network login)'. At the bottom, there is a section for 'Incorrect or missing information?' with a link to 'isppdedits@partners.org' and two 'NEW' items: 'What's New in the Partners Telephone Directory' and 'Cellular Phone Paging Frequently Asked Questions'.

4. Click on Dental Consult

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AND MASSACHUSETTS GENERAL HOSPITAL

[Initiate new search](#)


Search results:

Previous

Displaying matches 1-1 of 1 for 'Partners Personnel Lookup'	
Name	Department
Dental (BWH) Consults (7am -7am)	BWH / Oral Medicine & Dentistry, Division Of / Residency Program

Previous

5. Click on Change Paging Status



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AND MASSACHUSETTS GENERAL HOSPITAL

[Back to search results](#) | [Initiate new search](#)

**Dental (BWH) Consults
(7am -7am)**

PHS Page ID: [11560](#)

PHS Page Status: In Hospital - On Page

[Send a Page](#)

[Change Paging Status](#)


[Retrieve Messages](#)

[View Sent Pages](#)

Institution	BWH
Department	Oral Medicine & Dentistry, Division Of / Residency Program
Job Title	
E-mail	

6. Scroll down and choose 'Calls being taken by Page ID:'

7. Scroll down and choose 'Specify a start and end time'

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AND MASSACHUSETTS GENERAL HOSPITAL

[Back to detail screen](#) | [Initiate new search](#)

Change paging status

Name: Dental (BWH) Consults (7am -7am)
Page ID: 11560
Status: In Hospital - On Page
Paging Note: Add/Edit Note


Change paging status to: 7 - Calls being taken by Page ID: [dropdown]
Duration of this change: Specify a start and end time [dropdown]

File change Cancel

8. Click on Continue

9. Insert the Pager ID of the person you want to forward the call to

10. Specify time and date



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AND MASSACHUSETTS GENERAL HOSPITAL

[Back to Change Status screen](#) | [Back to detail screen](#) | [Initiate new search](#)

Edit Paging Status

Name: Dental (BWH) Consults (7am -7am) **Page ID:**
Status: In Hospital - On Page

Status	Calls being taken by Page ID:	ID	<input type="text"/>
Start Date	<input type="text" value="04/18/2013"/>	Start Time	<input type="text" value="05:25PM"/>
End Date	<input type="text"/>	End Time	<input type="text"/>
File Timed Status		Cancel	

11. Click File Timed Status



FIRST AND SECOND ON-CALL SCHEDULE

To view who is on first and second call for the BWH, go to BICS, enter your security password, enter "ci" at the system prompt, press "S" for schedule, press "C" for coverage list, press "D" for display/print schedule, select "On call dentistry," then select the month that you wish to view.

Some of this information is also available through the Partners Telephone Directory which is available online.

Alternatively, you can call the BWH page operator at 617-732-5500 to find out who is on call.

ED RECORDS

The on-call resident is to write up the dental consult note in EPIC, and forward it in EPIC to the attending on call for the day, who will then review the write up and sign it electronically. Any important patient information and potential immediate follow-up should be e-mailed or communicated to the resident and attending on service the next day. Residents need to keep the dental ED/Consult log up to date. This log is a white three-ring binder in the Oral Medicine and Dentistry clinic staff room. Residents must enter the date of service, patient name, and medical record number in the log.

Patient identification/Chief complaint (ID/CC): Age and gender presents with (state the complaint in patient's own words).

History of present illness (HPI):

- Date of onset for each complaint
- Describe the pain (acute or chronic, duration, what makes it better or worse, severity on a scale of 1-10, spontaneous or not, triggers, radiation/localized)
- Remark on h/o swelling, pus/foul taste, trismus, fever, N/V
- H/O similar episodes
- Referral source
- If trauma: describe the accident, LOC, pain, radiation of pain, occlusion

Past Medical History (PMH):

- State significant findings, as well as pertinent negatives. If there are significant findings, you must elaborate, eg. Is it well controlled, how they control it, frequency of episodes
- History of hospitalizations or surgeries (or lack of) should be stated
- Ask re: endocrine/DM, thyroid, asthma, bronchitis, pneumonia, SOB, TB, heart murmur, angina, HTN, MI, hematopoietic disorders, GI, Liv/Hep, kidney, musc/skel, neuro/sz, skin, psych, cancer, STD/HIV/AIDS, transfusions, trauma, pregnancy, tobacco, EtOH and recreational drug use. These are all pertinent negatives.

Medications:

- List medication and dosage. Use generic names, if possible.

Allergies:

- NKDA or list allergies and reactions

Past Dental History (PDH):

- Last dental visit (LDV), h/o care, dental phobias.



General Exam (GE):

- State level of consciousness (A&Ox3) alert and oriented x 3
- ETOH on breath, MJ on breath, agitated, hostile/aggressive behavior, anxious in appearance. You should state what you witnessed objectively as opposed to accusations. For instance, write "ETOH on breath", instead of "pt was drunk."

Extraoral Exam (EO):

- Remark on NC/AT vs swelling/hematomas, TMJ status, LAD, erythema, palpation tenderness. Describe any lesions found (size, color, consistency, etc.)
- If there is an obvious swelling, draw it out.

Intraoral Exam (IO):

- Soft tissue exam, including palate, pharynx, tongue, floor of mouth, labial and buccal mucosa, gingival. Describe any lesions found (size, color, consistency, location, etc.)
- Dentition in general and specific to cc (eg. Mobility, caries, fx, percussion sensitivity, etc.)

Radiographic Exam (RE):

- If NOT taken: you must state why, i.e. not needed, pt declined, pt brought radiograph in. All patients with swelling EO/IO, LAD, mobility, pus, percussion sensitivity should have a radiograph taken unless they refuse or brought their own in.
- If a pt refuses, state "pt refused radiograph AMA (against medical advice)".
- ALL trauma patients should have a panorex &/or PA's taken (If taken: you must state what was taken and what you found).

Assessment:

- State tooth/teeth
- ADA diagnosis i.e., acute exacerbation of chronic periapical periodontitis, necrotic pulp, irreversible pulpitis, reversible pulpitis, osteitis, generalized severe periodontitis...

Plan:

- If no treatment is done, you must state a clear referral.
- If treatment was offered but patient declined, you must state that it was offered and pt. declined &/or refused AMA.
- If treatment is done, clearly state what was done and follow-up referrals.
- All Rx should be written here with the # dispensed, dosage and instructions

Instructions to Patient:

- Instructions should be listed in the language that the patient can understand. The patient is to sign the form followed by the dentist's signature, printed **legible** name, and I.D.
- The blue copy of the discharge form is given to the patient and the patient is discharged.

ED REVIEW SESSIONS

ED review session will occur the 4th Wednesday of the month after the Oral Medicine seminar. Please keep in mind interesting cases that you saw during your call times so we can all learn from them. Feel free to always ask if you have a question or concern.



MANAGEMENT OF COMMON DENTAL EMERGENCIES

DENTAL CARIES

- A. Dx: Reversible Pulpitis
 - 1. Without Pulp Exposure

Excavate the dental caries and place Dycal and temporary restoration.
 - 2. With Pulp Exposure
 - a. If it is a small pin point bleeding exposure (< 1mm) place Dycal and temporary restoration (IRM)
 - b. If the exposure is large (> 1mm) proceed with a pulpectomy

- B. Irreversible Pulpitis

Perform a pulpotomy or pulpectomy with rubber dam isolation

Place a cotton pellet in the chamber and close with Cavit

APICAL PERIODONTITIS

- A. Without Root Canal Filling

Perform a pulpectomy with rubber dam isolation

Place a cotton pellet in the chamber and close with Cavit

- B. With Root Canal Filling
 - 1. Adjust the occlusion
 - 2. Give the patient an injection of long-acting local anesthetic (0.5% Marcaine w/ 1:200,000 epi)
 - 3. Place the patient on pain medication.



ACUTE APICAL ABSCESS

1. Open into the pulp chamber and instrument the length of the canals. Leave the pulp chamber open for drainage.
2. If there is an area of fluctuance, I&D the swelling and obtain **both** aerobic and anaerobic cultures if drainage is established. **WHENEVER CULTURES ARE OBTAINED, IT IS THE RESPONSIBILITY OF THE RESIDENT WHO OBTAINED THE CULTURE TO CHECK THE RESULTS WITHIN 48 HOURS. IF THIS IS NOT POSSIBLE, THE RESIDENT MUST HAVE ONE OF HIS/HER COLLEAGUES CHECK THE CULTURE RESULT AND CHANGE THE PATIENT'S ANTIBIOTIC REGIMEN IF NECESSARY. THIS IS VERY IMPORTANT!**
3. Prescribe antibiotics and pain medication.

RESTORATIVE PROBLEMS

- Permanent restorations are not to be placed in the ED. Lost or broken restorations are to be replaced with a temporary restoration.
- Temporary crowns or bridges are to be repaired or replaced using temporary cement. Permanent crowns or bridges are to be recemented with temporary cement. Patients must be informed that temporary cement was used and that they must be followed up by their private dentists.

PROSTHODONTIC PROBLEMS

Denture Repairs/Relines: Denture repairs are not considered an emergency procedure.

Denture Sores:

Examine the patient to determine if the problem is due to the denture base. If it is determined that the problem is a denture sore, adjust the denture base. If the adjustments are extensive, advise the patient to leave the denture out until a regular dental appointment can be scheduled.

ORTHODONTIC PROBLEMS

For broken ligature wires either remove or bend to prevent irritation of soft tissues.

PERIODONTAL EMERGENCIES

Acute Necrotizing Ulcerative Gingivitis:

Using topical or local anesthetic, scale supragingival area with hand scalers. Irrigate the area well and give the patient oral hygiene instructions. Prescribe penicillin or clindamycin if the patient is febrile or has adenopathy.

Periodontal Abscess:

1. Verify the diagnosis with a complete examination including pulp testing of the involved teeth.
2. Debride the area with subgingival scaling. If necessary, I&D the abscess **and obtain cultures.**
3. Prescribe antibiotics.
4. Prescribe pain medication if necessary.



Pericoronitis:

1. Moderate Pericoronitis: Gently irrigate with sterile saline. Reduce occlusion of opposing tooth if it is traumatizing soft tissue. Prescribe antibiotics and pain medication. Instruct the patient to irrigate the area with saline (provide patient with a Monoject plastic syringe). Instruct the patient to return if swelling increases.
2. Severe Pericoronitis: Gently irrigate with sterile saline. I&D if fluctuance is present **and obtain cultures**. Reduce the occlusion of the opposing tooth if it is traumatizing soft tissue. Prescribe antibiotics and pain medication. Check carefully to assure that the patient has no deviation of the soft palate or swelling of oral pharynx before discharging the patient. **If the patient is febrile, has trismus, or deviation of the soft palate, the ENT resident is to be consulted.**

DENTAL ALVEOLAR ABSCESS

1. Determine the source of the abscess.
2. Determine the extent of the infection.
3. If there is an area of fluctuance, the abscess is to be incised and drained. **Consider obtaining cultures.**
4. Prescribe antibiotic and pain medication.
5. Refer the patient to either an endodontist or oral and maxillofacial surgeon for treatment.
6. If the infection has involved facial spaces beyond the buccal space or there is peri-orbital edema or swelling of the floor of the mouth or the oropharynx, the on-call ENT resident is to be contacted.
7. The patient should be considered for admission and the on-call ENT resident should be contacted when the following situations are present:
 - a. Temperature > 100
 - b. Increased WBC
 - c. Swelling of the facial spaces other than the buccal space.
 - d. Functional changes (difficulty swallowing or compromised airway; peri-orbital edema; trismus)
 - e. Systemic conditions which might place the patient at high risk of complications (eg. chemotherapy, HIV).
 - f. Infections which are refractory to a current antibiotic regimen.

TRAUMA

When there is trauma to the face, facial fractures must be ruled out.

Dental Alveolar Fractures:

1. Take occlusal and/or periapical radiographs.
2. Examine the area by digital manipulation.
3. Splint all displaced teeth in a satisfactory arch relationship.
4. Prescribe oral antibiotic, pain medication, and a blenderized, soft diet.

Fractures of the Maxilla and Mandible:

1. First determine if the patient's airway is patent. Remove dentures, broken teeth and foreign objects from the patient's mouth. **If teeth or dentures cannot be accounted for, order a chest x-ray.**



2. Perform a complete clinical examination.
3. If fractures are suspected, **inform the ED attending and contact the trauma service for the day, either plastics or ENT**. A CT scan (axial and coronal images) will be ordered.
4. If the trauma is significant, there may be cervical spine fractures. An examination of the cervical spine includes palpation of the neck in a stable position and C-spine films. It is likely that this will already have taken place before the patient is triaged to you, but you should always be sure. Any questions should be directed to the on-call attending ED physician.

FRACTURED TEETH

1. Ellis Class I Fracture: Not an emergency - smooth sharp edges and take periapical radiograph to rule out root fracture and/or pulpal involvement.
2. Ellis Class II Fracture: Take a radiograph, as above. Cover dentin with Dycal and temporize.
3. Ellis Class III Fracture: Take a radiograph, as above. If pulp exposure is less than 1 mm in diameter, cover with Dycal and temporize. If greater than 1 mm in diameter, perform pulpectomy.
4. Ellis Class IV Fracture: Perform pulpectomy.
5. Root Fractures: assessed radiographically
 - a. If crown is very mobile and the fracture is in the coronal 1/3 of the root, remove the coronal fragment and perform pulpectomy on the apical portion. Instruct patient to schedule an appointment with an oral & maxillofacial surgeon for the removal of the apical fragment.
 - b. If the tooth is mobile and the fracture is in the middle 1/3, reposition the crown and splint the tooth in place. Instruct the patient to schedule an appointment with a general dentist or endodontist for treatment and/or prognostication.
 - c. If the root fracture is in the apical 1/3 of the root, reposition the tooth and splint if necessary. Instruct the patient to schedule an appointment with a general dentist or endodontist for care.

THE BLEEDING PATIENT*

Throughout the year, you are sure to encounter patients with postoperative or gingival bleeding problems. It is important to first sort out the potential etiology behind the bleeding. A complete history is necessary. After the history is obtained, careful examination of the bleeding site will direct the appropriate management. It is not expected that you will be able to complete all of the steps outlined below without help/input from attending staff, or from staff from another service, such as plastics or ENT. However, you should be very familiar with the management of the different scenarios outlined below.

A. Extraction Site or Bony Surgery Site Bleeds

Etiology

1. Loss of suture(s)
2. Loss of organized blood clot due to smoking, spitting, rinsing or using a straw within 24 hours of the surgery.
3. Reopening of a vessel that was vasoconstricted or closed at the time of surgery.
4. The presence of granulation tissue in the socket. This tissue is highly vascular.
5. An acquired coagulopathy from aspirin, NSAIDs, coumadin, alcoholic or other liver disease.
6. An intrinsic coagulopathy.



Management

1. Complete history, especially making note of bleeding abnormalities, blood dyscrasias, and medications (for example, aspirin, coumadin, etc.) Also ask about habits: smoking, rinsing, spitting, straws.
2. Under appropriate light, examine for obvious bleeding vessels. If visualized, electrically coagulate or ligate with resorbable suture.
3. If bleeding is brisk or pulsatile, inject local with a vasoconstrictor. Debride/irrigate the socket. Look for small bone bleeders. These may be crushed with a metal instrument (like the flat side of a periosteal elevator) or bone wax can be used over the bleeder and pressed into place with the periosteal elevator. Consider packing Surgicel.
4. If no vessels are seen, have the patient bite on gauze for 20 minutes, while observing him/her. If this fails, use gauze that has been soaked in topical thrombin. Have the patient bite on the gauze for another 20 minutes.
5. Once local causes have been ruled out, order appropriate laboratory tests: a CBC with differential, PT, PTT, INR, bleeding time. Seek medical consultation if abnormalities are found.

B. Gingival Bleeds

Etiology

1. Gingivitis or periodontal disease
2. Trauma
3. Acquired coagulopathy (drugs, alcohol)
4. Intrinsic coagulopathy (Factor deficiency/hemophilia)
5. Other systemic cause (i.e. acute leukemia)

Management

1. Careful history and complete extraoral/intraoral examination
2. Obtain appropriate blood tests: CBC, PT/PTT/INR, bleeding time. If abnormalities are found, seek medical advice.
3. Use local anesthetic with a vasoconstrictor. Inject into area.
4. Use gauze pressure
5. Remove granulation tissue associated with periodontitis.
6. Repair traumatic injuries

C. Soft Tissue Incision Bleeds

Etiology

1. Bleeds from the wound margins
2. Hematomas
3. Vascular bleed within the wound



Management

1. For wound margin bleeders or slow venous bleeders, apply direct pressure and/or sutures. Observe for 20 minutes.
2. Arterial (pulsatile) bleeders require the wound to be opened further. The bleeding vessel must be found and coagulated or ligated. Pressure should be applied for 20 minutes, with re-evaluation.
3. Hematomas must be evacuated. Open the incision a bit more and probe the tissue with a blunt hemostat. When the hematoma is found, express the blood. Sutures should be placed and pressure should be applied for 20 minutes, with re-evaluation.



COMMUNITY SERVICE

Residents participate in community service activities including but not limited to community outreach and education in Oral Medicine topics. Residents will be responsible for preparing a 30 minute presentation on the most frequently encountered conditions in the oral cavity. The conditions should resemble the most common referrals to oral medicine units by dental practitioners and/or medical practitioners. The presentation is provided to the Cambridge Health Alliance group which usually consists of volunteer dental students, nurses, dental health care auxiliaries and qualified dentists working in a community dental service in Boston.