

# Consortium of Operative Dentistry Educators

(CODE)



REGIONAL REPORTS  
FALL 2012

*Web site: <http://www.unmc.edu/code>*

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THE CODE 2012 REGIONAL REPORTS IN PDF FORMAT MAY BE FOUND ON THE WEBSITE:

[HTTP://WWW.UNMC.EDU/CODE](http://www.unmc.edu/code)

PLEASE UPDATE YOUR SCHOOL’S DIRECTORY PAGE IN THE CODE NATIONAL DIRECTORY LOCATED ON THE CODE WEBSITE. TO ACCESS THE DIRECTORY, USE THE “PLEASE HELP UPDATE” LINK ON THE MAIN MENU OF THE WEBSITE.

THANK YOU FOR YOUR ASSISTANCE.

On February 27, 2012, CODE held a National/International meeting during the annual meeting of the Academy of Operative Dentistry in Chicago. Dr. Howard Strassler, University of Maryland School of Dentistry presented the program "Understanding Light Curing Improved Clinical Success". CODE acknowledges Dr. Richard Price, Dalhousie University for his time and assistance in making the presentation possible. The Power Point of the presentation is posted on the CODE website.

I had the privilege to attend the Region II meeting at the Marquette University School of Dentistry, the Region VI meeting at the Georgia Regents University College of Dental Medicine and the Region I meeting at the University of California San Francisco School of Dentistry.

Continue to familiarize your Deans and Department chairs with CODE's objectives and its value to their school. Their support is crucial in providing the means for faculty to attend or host Regional meetings.

Spread the word about CODE and work to provide input to Licensure Boards on Restorative Dentistry. Encourage/invite members of the Licensure examining boards to attend the Fall Regional meetings. Invite our colleagues in the Armed and Public Health Services to our meetings - both Regional and National.

Support of CODE by payment from the schools for annual dues is excellent, although not without repeated follow-up efforts by the National office. The same can be said for the collection of the Fall Regional Reports.

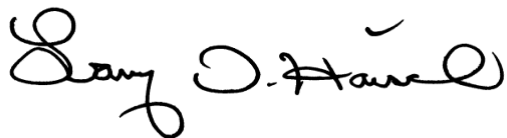
Thank you to webmaster, Dr. William Johnson, for the timely website updates and enhancements.

My appreciation to the Regional Directors and the meeting hosts (Drs. Oanh Lee, Gary Stafford, Joseph Connor, Adriana Semprum, Richard Lichtenthal, Gary Holmes) the Operative Section of ADEA and the general membership for helping to make CODE what it is and what it accomplishes.

As many are aware, this is my last year as National Director. I have been so privileged to serve for fifteen years as your National Director of such a meaningful organization. The opportunity to meet and interact with so many individuals dedicated to students and the furthering of dental education has been most rewarding.

Thank you to my Dean, Dr. John Reinhardt and Department Chairman, Dr. Henry St. Germain for their support. I could not have accomplished much of the operational aspects of CODE without the assistance of Ms. Linda Diehl. Thank you, Linda.

Best wishes,

A handwritten signature in black ink, reading "Gary D. Howell". The signature is written in a cursive style with a checkmark above the "H".

## **Consortium of Operative Dentistry Educators (CODE)**

Forward - Larry D. Haisch, D.D.S.

National Director

*Haisch LD (ed.) CODE Regional Annual Reports 2012.*

*<http://www.unmc.edu/CODE>*

### **ORIGINS OF C.O.D.E (Consortium of Operative Dental Educators)**

#### **Project ACORDE (A Consortium of Restorative Dentistry Education)**

The date usually cited as the starting point for the development of Project ACORDE is 1966. That year, in Miami, the Operative Dentistry Section of AADS formed a committee charged to plan for the cooperative development of teaching dental materials.

In July of 1971, the Dental Health Center, San Francisco, invited faculty from 14 dental schools to explore the feasibility of reaching consensus of a series of operative dental procedures. The outcome of the meeting suggested that it was feasible to achieve broad-based agreement on basic procedures: task analyses could be developed in which consensus could be reached on essential details of methods and instrumentation. The Project ACORDE committee was charged with the responsibility for coordinating curriculum development efforts on a national level in November of that year. Prominent in this project development were Bill Ferguson, David Grainger and Bob Wolcott.

The Broad Goals and Functions of this committee were:

1. To gain agreement among all participating dental schools on the teaching of operative dentistry functions and gain acceptance by all schools.
2. To produce materials which can be universally accepted and utilized for teaching dental students and expanded function auxiliaries.

During 1974, a 15-module package entitled Restoration of Cavities with Amalgam and Tooth-colored Materials was presented.

The preparation package entitled Cavity Preparations for Amalgam and Tooth-colored Materials became available for distribution in March of 1976.

Project ACORDE was found to have produced three major benefits for dental education:

1. It opened new channels of communication among dental educators.
2. It suggested uniform standards of quality for the performance of restorative skills.
3. It produced numerous lesson materials which were useful both for teaching students and as models of developers of other lessons.

The benefit, most frequently cited by dental school faculty, was communication. The primary example of the communication begun by Project ACORDE, which has lasted well beyond the initial project, is CODE (Consortium of Operative Dentistry Educators). CODE has as its goal, the continuation of meetings for the purpose of information exchange among teachers of operative dentistry. Regional CODE meetings are held annually with minutes of each session recorded and sent to the national director for distribution. This system is a direct spin-off of Project ACORDE.

The first annual session of CODE was held in 1974/75.

### The Early Years (1974-1977)

As founding father of the concept, Robert B. Wolcott of UCLA assumed the role of national coordinator and appointed Frank J. Miranda of the University of Oklahoma as national secretary. A common agenda to be provided to all six regions was established at this time. The first regional meetings were held in the winter of 1974. During the first three years of operation, each region devised a system of rotation so that a different school hosted the regional meeting each year, thus providing a greater degree of motivation and bringing schools closer together in a spirit of fellowship and unity. Each region submitted suggestions for future agendas, thereby insuring a continued discussion of interesting and relevant topics. A collection of tests or a test bank was started in early 1976. This bank consisted of submitted written examination questions on specified topics that were compiled and redistributed to all schools.

### The Transition Years (1977-1980)

The first indication that the future of CODE was in jeopardy came in 1977, the first year that a national report could not be compiled and distributed. As the result of the efforts of a committee chaired by Dr. Wolcott, the original concept was renewed in 1980. Its leadership had been transformed from the structure of a national coordinator and secretary to a standing subcommittee under the auspices and direction of the Section of Operative Dentistry of the AADS.

### The Reaffirmation Years (1997 - 1998)

During the 1997 meetings of both the Operative Dentistry Section Executive Council and the Business meeting of the Section, interest was expressed about reorganizing CODE and aligning it more closely with the Section. During the following year, fact finding and discussions occurred to formulate a reorganization plan. The plan was submitted for public comment at the 1998 meeting of the Operative Dentistry Section Executive Council and the Business meeting of the Section. At the conclusion of the Business meeting the reorganization plan was approved and implemented.

### Reaffirmation of CODE official title (2003)

CODE changed its name from *Conference of Operative Dentistry Educators* to *Consortium of Operative Dentistry Educators* due to a ratification vote at the Fall 2003 Regional CODE meetings.

### The Future of CODE

The official sponsorship by the Section of Operative Dentistry of ADEA (formerly ADDS) and the revised administrative structure of CODE are both designed to insure its continuance as a viable group. The original concepts, ideas and hopes for CODE remain unchanged and undiminished. Its philosophy continues to be based on the concept of dental educators talking with each other, working together, cooperating and standardizing, when applicable, their teaching efforts and generally socializing in ways to foster communication. There is every reason to believe that organizations such as CODE, and those developed in other fields of dentistry, will continue to crumble the barriers of provincialism and provide the profession with a fellowship that is truly national in scope.

### National Coordinators/Directors

1974 - 1982	Robert B. Wolcott (UCLA)
1982 - 1986	Thomas A Garmen (Georgia)
1986 - 1989	Frank Miranda (Oklahoma)
1989 - 1998	Marc Gale (Florida)
1998 - to present	Larry Haisch (Nebraska)

## **ORGANIZATION OPERATION**

The Section of Operative and Biomaterials of the American Dental Education Association (ADEA) has “oversight” responsibility for sustaining and managing the activities of CODE.

- The National Director of CODE will be appointed by the Executive Council of the Operative and Biomaterials Section for a three-year renewable term.
- The National Director will be selected from a list of one or more individuals nominated for the position by the CODE Advisory Committee after input from the regions.
- The National Director will perform the functions and duties as set forth by the Council.
- The National Director will be a joint member on the Council and will be expected to attend a regional CODE meeting and the annual meeting of the Council and Section. The National Director may also serve as an elected officer of the Council.

A CODE Advisory Committee will assist the National Director with his/her duties.

- A CODE Advisory Committee will consist of the Regional Directors from each of the six regions, the National Director and three at-large members.
- Each Regional Director is selected by their region. The at-large member(s) may be selected by the National Director and/or the Executive Council.
- The terms are three years, renewable, not to exceed two consecutive terms.
- The National Director serves as Chair of the Advisory Committee.

The annual CODE Regional meetings will serve as the interim meeting of the section. Some section business may be conducted at each CODE Regional meeting as part of the National agenda.

Regional Directors:

- Will be a member of ADEA and the section of Operative Dentistry
- Will oversee the conduct and operation of CODE in their respective region while working in concert with the national director
- Will have communication media capabilities including e-mail with the capability of transmitting attachments
- Will attend the region’s meeting
- Ensure that meeting dates, host person and school are identified for the following year
- Do follow-up assist on dues “nonpayment” by schools
- Ensure that reports of regional meetings are submitted **within 30 days** of meeting conclusion to the national director
- Ensure that individual school rosters (operative based) are current for the region
- Identify a contact person at each school
- Assist in determining the national agenda
- Other, as required

## CODE ADVISORY COMMITTEE

(Revised 1-29-13)

	Region	Regional Director	Phone/E-mail	Term (3 years)
I	Pacific	Dr. Oanh Le UCSF San Francisco, CA	650-558-9253 oanh.le@ucsf.edu	2012-2014
II	Midwest	Dr. Christa Hopp Southern Illinois University Alton, IL	618-474-7052 chopp@siue.edu	2012-2014
III	South Midwest	Dr. Scott Phillips Mississippi School of Dentistry Jackson, MS	601-984-6042 smphillips@sod.umsmed.edu	2013-2015
IV	Great Lakes	Dr. Marsha Babka Midwestern University Downers Grove, IL	630-515-7476 mbabka@midwestern.edu	2013-2015
V	Northeast	Dr. Richard Lichtenthal Columbia University New York, NY	212-305-9898 rml1@columbia.edu	2011-2013
VI	South	Dr. R. Gary Holmes Georgia Regents University August, GA	706-721-2881 rholmes@gru.edu	2011-2013
I	At-Large	Dr. Edward DeSchepper Roseman University South Jordan UT	801-878-1417 edeschepper@roseman.edu	2013-2015
III	At-Large	Dr. Edmond Hewlett UCLA Los Angeles, CA	310-825-7097 ehewlett@dentistry.ucla.edu	2013 - 2015
VI	At-Large	Dr. Kevin Frazier Georgia Regents University August, GA	706-721-2881 kfrazier@gru.edu	2011-2013
II	National Director	Dr. Larry Haisch UNMC Lincoln, NE	402-472-1290 lhaisch@unmc.edu	2011-2013
II	Web Master	Dr. William Johnson UNMC Lincoln, NE	402-472-9406 wwjohnson@unmc.edu	No Term

**Consortium of Operative Dental Educators (CODE)  
2012-2013**

**Paid – Regions and Schools**

Paid members as of January 11, 2013

74 Schools (10 Canadian, 64 USA)

<b><u>Region I (Pacific) - 14 Schools</u></b> X Alberta- Canada X ATSU – (Mesa), Arizona X Midwestern University (Glendale), Arizona X British Columbia- Canada X Loma Linda X Nevada X Oregon X UOP - Arhtur Dugoni X Roseman – Utah X UCLA X UCSF X USC - Herman Ostrow X Western University- California X Washington	<b><u>Region II (Midwest) - 10 Schools</u></b> X Colorado X Creighton X Iowa X Manitoba – Canada X Marquette X Minnesota X UMKC – Missouri X UNMC - Nebraska X Saskatchewan – Canada X Southern Illinois
<b><u>Region III (South Midwest) - 7 Schools</u></b> X Baylor X Louisiana State X Mississippi X Oklahoma X Tennessee X UTHSC- San Antonio X UTHSC- Houston	<b><u>Region IV (Great Lakes) - 11 Schools</u></b> X Case Western X Detroit Mercy X Illinois X Indiana X Michigan X Midwestern University (Downers Grove, Illinois) X Ohio State X Pittsburgh X University of Buffalo X West Virginia X Western Ontario - Canada
<b><u>Region V (Northeast) - 19 Schools</u></b> X Boston X Columbia X Connecticut N Dalhousie – Canada X Harvard N Howard N Laval - Canada X Maryland X McGill – Canada N Montreal- Canada NS New England – Maine (Opening Fall 2013) X New Jersey X NYU X Pennsylvania X Stony Brook University X Temple X Toronto- Canada N Tufts X US Naval Dental School	<b><u>Region VI (South) - 13 Schools</u></b> X Alabama X East Carolina X Florida X Georgia X Kentucky NS Lake Erie College- Florida (Opened Fall 2012) X Louisville X Meharry X North Carolina X Nova Southeastern X Puerto Rico X South Carolina X Virginia

X = paid    N= Not paid    IP = In progress    NS = New schools

ARD-Staff/CODE/Pd Rg&Sch



**The National Agenda for 2012** was established after review of the suggestions contained in the reports of the 2012 Fall Regional meetings, National CODE Meeting and from the Regional CODE Directors. Previous National agendas are reviewed to avoid topic duplication. Inclusion of a previous topic may occur for discussion from the aspect to what has changed and the response/action taken and the outcome.

Thank you to the Regional CODE Directors and the membership for making recommendations to establish the National Agenda. Each Region is encouraged to also have a Regional Agenda.

**Each school attending the Regional Meetings is requested to bring their responses to the National Agenda in written form AND electronic media**  
**This information is vital to the publication of the Annual Fall Regional Report.**

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Continue to invite your colleagues, who are Dental Licensure Board examiners and your Military and Public Health Service colleagues who head/instruct dental education programs to your Regional meetings.

**Each Region should select next year's meeting site, date or tentative date during your Fall Regional CODE meeting so this information may be published in the Annual Fall Regional Report and on the Web site.**

**The Regional meeting reports** are to be submitted to the National Director in **publishable format** as an attachment to e-mail.

*The required format and sequence will be:*

- 1. CODE Regional Meeting Report Form\*\***
- 2. Summary of responses to the National Agenda.**
- 3. Individual school responses to the National Agenda**
- 4. The Regional Agenda summary and responses.**
- 5. CODE Regional Attendees Form\*\***

**\*\*** (Copies may be obtained from the Web site:  
<http://www.unmc.edu/code/>).

**NOTE:** to locate the web site via a search engine, enter "Academy of Operative Dentistry", click on "member", then use the link "CODE & ADEA".

Send a hard copy and an electronic copy of the report to the National Director. Both electronic and hard copy versions are to be submitted **within thirty (30) days** of the conclusion of the meeting.

**National CODE Meeting:**

The meeting will be held **Monday, February 25, 2013** from 4:15 pm to 6:00 pm at the **Westin Michigan Avenue Hotel, room TBA** in Chicago, Illinois. Suggestions as to how to make this meeting productive and efficient are requested.

**National Directory of Operative Educators:**

The CODE National Office maintains the National Directory of Operative Educators as a source for other professionals. It is imperative that the information be as current as possible.

To update your university's directory listing on the CODE website,

**<http://www.unmc.edu/code/>**,

Click on the red link, "Please help update," found under the CODE menu on the left side of the screen. Make any necessary changes and click "submit form".

Please have each school in your Region update the following information for the National Directory of Operative Educators:

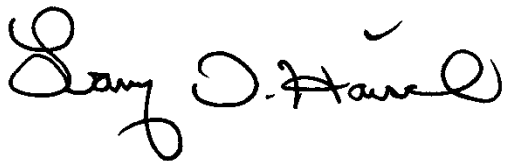
*School name and complete mailing address*

*Individual names: (full time), phone #, fax #, e-mail address of faculty who teach operative dentistry.*

*(This could be individuals in a comp care program, etc. if there is no defined operative section of department.)*

Your help and cooperation in accomplishing the above tasks helps save time and effort in maintaining a complete web site and publishing the Annual Fall Regional Report in a timely fashion.

Thank you,



Larry D. Haisch, D.D.S.  
National Director, C.O.D.E.  
UNMC College of Dentistry  
40<sup>th</sup> & Holdrege Streets  
Lincoln, Ne 68583-0750

lhaisch@unmc.edu  
Office: 402-472-1290  
Fax: 402-472-5290

## 2012 NATIONAL CODE AGENDA

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as PDF files for utilization in the Annual Fall Regional Report)*

### GENERATION Y/MILLENNIAL DENTAL STUDENTS

#### **Background:**

During a recent ADEA (American Dental Education Association) board meeting in Washington, D.C., 40 millennial dental students discussed their perceived strengths and weaknesses and other trends to shed light on how schools can provide better dental education. Millennials are those students born between 1979 and 1994. The dental students said they use technology constantly to access information, conduct business and stay in touch, and that the Internet, text messaging, digital music, and downloads were all vital to their lives. The students expressed a preference for the ease of use of technology, but wanted to ensure that personal interaction remained a key part of their learning experiences. Many students indicated that their best academic experiences were those that involved a great deal of hands-on learning and allowed them to study in a group setting. The students also felt strongly that the best professors were those who care whether students were learning class materials, rather than just memorizing them, and those who made themselves available for help when necessary.

#### **Millennial Generation (Generation Y):**

1. **Definition:** a term used to refer to the generation, born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.
2. **Common Traits:**
  - **Tech-Savy:** Generation Y grew up with technology and rely on it to perform their jobs better. Armed with BlackBerrys, laptops, cellphones, and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through e-mail and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations.
  - **Family-Centric:** The fast-track has lost much of its appeal for Generation Y who is willing to trade high pay for fewer billable hours, flexible schedules and a better work/life balance. While older generation s may view this attitude as narcissistic or lacking commitment, discipline and drive, Generation Y have a different vision of workplace expectations and prioritize family over work.
  - **Achievement-Oriented:** Nurtured and pampered by parents who did not want to make the mistakes of the previous generation, Generation Y is confident, ambitious, and achievement-oriented. They have high expectations of their employers, seek out new challenges and are not afraid to question authority. Generation Y wants meaningful work and a solid learning curve.
  - **Team-oriented:** As children, Generation Y participated in team sports play groups, and other group activities. They value teamwork and seek the input and affirmation of others. Part of a no-person-left-behind generation, Generation Y is loyal, committed and wants to be included and involved.
  - **Attention-Craving:** Generation Y craves attention in the forms of feedback and guidance. They appreciate being kept in the loop and seek frequent praise and reassurance. Generation Y may benefit greatly from mentors who can help guide and develop their young career.

## **I. MILLENNIAL IMPACT**

### **A. Classroom/Didactic Experiences**

1. Has the way your department teaches the didactic component of restorative dentistry theory or concepts changed significantly in the last 10-12 years? (e.g. traditional class lectures replaced with small group discussion session, or most of the didactic curriculum is delivered on-line).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

### **B. Pre-Clinical Laboratory Experiences**

1. Has the way your department teaches the pre-clinical laboratory component of restorative dentistry theory or concept changed significantly in the last 10-12 years? (e.g. traditional work benches replaced with high tech manikin labs or significant use of patient simulators, like DentSim).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

### **C. Clinical Experiences**

1. Has the way your department conducts clinical teaching of restorative dentistry changed significantly in the last 10-12 years? (e.g. discipline clinics replaces by general dentistry clinics, traditional clinical requirements abandoned for "activity points")
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

## **II. DIGITAL DENTISTRY**

- A. Has your school incorporated digital dentistry as impression taking, model formation, CAD-CAM, etc.?
- B. Which technologies are you using? Please name the brands.
- C. What have been your experiences with these technologies?
- D. To what degree are they used in the teaching program?
- E. Has this technology had a positive or negative impact on clinic income?
- F. Are all interested faculty trained or is there a specific "digital guru"?
- G. Has it replaced conventional techniques or does it augment conventional techniques?
- H. What is the response from the students?
- J. Are intraoral digital impressions taken or conventional impressions which are scanned afterwards?

- K. Do the students realistically have enough time to totally complete a restoration from preparation to cementation in a single appointment (morning or afternoon session)?
- L. Please indicate the time length of a morning or afternoon clinic session.

### **III. RESTORATIVE DENTISTRY**

- A. Are operative procedures in the clinics done the same way as taught in pre-clinics?
- B. Are the same materials, instruments and burs used?
- C. If there are differences, how are they reconciled?
- D. What methods/systems are taught for polishing composites?
- E. Are any bulk fill composite techniques taught? If yes, please describe.
- F. Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? What about new techniques – how long to implement into pre-clinic labs and clinics?

### **IV. SCHOLASTIC**

- A. What is considered scholarly activity at your institution?
- B. What are the expected standards for Assistant, Associate, and Full Professors?
- C. If your institution has clinical tracks, what are the expected standard levels for each level?

### **V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

- A. What, if any, are the implications of the following article? Summarize and report the discussion.  
*Dental Composite Restorations and Psychosocial Function in Children*. Maserejian Nancy N., Trachtenberg Felicia L., Hauser Russ, McKinlay Sonja, Shrader Peter, Tavares Mary, and Bellinger David C. Pediatrics originally published online July 16, 2012. DOI: 10.1542/peds.2011-3374.  
<http://pediatrics.aappublications.org/content/early/2012/07/11/peds.2011-3374.full.pdf+html>
- B. In the last five years, has your College/School made policy changes that impact/restrict the utilization of amalgam? If yes, what are the changes and the rationale for such changes?

### **VI. REGIONAL CODE AGENDA**

*To be established by the respective Region and Regional Director. Please also report on responses to the Regional Agenda by all participants.*

## CODE REGIONAL MEETING REPORT FORM

### REGION

#### LOCATION AND DATE OF MEETING:

University: \_\_\_\_\_

Address: \_\_\_\_\_

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

#### CHAIRPERSON:

Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

University: \_\_\_\_\_

Fax #: \_\_\_\_\_

Address: \_\_\_\_\_

E-mail: \_\_\_\_\_

**List of Attendees:** Please complete the CODE Regional Attendees Form (following page)

#### Suggested Agenda Items for Next Year:

#### LOCATION AND DATE OF NEXT REGIONAL MEETING:

Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

University: \_\_\_\_\_

Fax #: \_\_\_\_\_

Address: \_\_\_\_\_

E-mail: \_\_\_\_\_

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

Please return all completed enclosures to  
Dr. Larry D. Haisch, National Director, UNMC College of Dentistry;  
40<sup>th</sup> and Holdrege Streets; Lincoln, NE 68583-0740.

**Deadline for return: 30 Days post-meeting**

Office: 402 472-1290 Fax: 402 472-5290 E-mail: lhaisch@unmc.edu

Also send the information on a disk and via e-mail with all attachments.

Please indicate the software program and version utilized for your reports.

## CODE Region \_\_\_\_ Attendees Form

NAME	UNIVERSITY	PHONE #	FAX #	E-MAIL ADDRESS

# **Consortium of Operative Dentistry Educators**

## **(CODE)**



### **REGION I (PACIFIC) ANNUAL REPORTS**

Region I Director:

Dr. Oanh Le

UCSF

San Francisco, CA

Region I Annual Meeting Host:

Dr. Oahn Le

University of California

San Francisco, CA

Region I Annual Report Editor:

Dr. Oahn Le

Chapter 1



## CODE REGIONAL MEETING REPORT FORM

**REGION** I Pacific

### LOCATION AND DATE OF MEETING:

University: University of California

Address: San Francisco, CA

Date: November 29 - 30, 2012

### CHAIRPERSON:

Name: Dr. Oanh Le

Phone #: 650-558-9253

University: UCSF

Fax #:

Address: San Francisco, CA

E-mail: Oanh.le@ucsf.edu

**List of Attendees:** Please complete the CODE Regional Attendees Form (following page)

### Suggested Agenda Items for Next Year:

Dental Materials: Do you use/teach: GIC, Composite (compactable, bulk fill/sonic)?

How do you treat box forms, snow-plow flowable, Bioactive silica, i.e. Biodentin?

Adhesive: total etch, self-etch, selective etch

Sealant material: amalgam, compomer, indirect composites, high radiopaque flowable

Determination of Competence doer graduation, test cases, and Mock boards

How isolation is achieved for restorative - rubber dam, Isolite.

How is evidence-based dentistry being utilized in Operative and Fixed? Multiple site testing

How is remediation used at your school?

Use of Cambria - how is it being incorporated in Restorative dentistry?

### LOCATION AND DATE OF NEXT REGIONAL MEETING:

Name: Dr. Bernard Kula

Phone #: 780-953-5754

University: University of Alberta

Fax #:

Address: Edmonton Alberta, Canada

E-mail: Bernard.kula@ualberta.ca

Date: September 19 - 20, 2013

Please return all completed enclosures to  
Dr. Larry D. Haisch, National Director, UNMC College of Dentistry;  
40<sup>th</sup> and Holdrege Streets; Lincoln, NE 68583-0740.

**Deadline for return: 30 Days post-meeting**

Office: 402 472-1290 Fax: 402 472-5290 E-mail: lhaisch@unmc.edu

Also send the information on a disk and via e-mail with all attachments.

Please indicate the software program and version utilized for your reports.

## CODE Region \_\_I\_\_ Attendees Form

NAME	UNIVERSITY	PHONE #	FAX #	E-MAIL ADDRESS
Michael Gritz	UCLA	301-825-6987	562-997-0537	mgritz@dentistry.ucla.edu
J. Martin Anderson	UWA	206-390-4855	253-852-5159	jma@u.washington.edu
Yen-Wei Chen	UWA	206-353-9563		ywchen@u.washington.edu
Bertha Alarcon	Western University	323-240-2964		balcorn@western.edu
Ingrid Enamuels	UBC	604-822-3566	604-822-3562	enamuel@dentistry.ubc.ca
Karen Gardner	UBC	604-822-3566	604-822-3562	kgardner@dentistry.ubc.edu
Chris Halket	MUCDM	623-572-3815		chalke@midwestern.edu
Klud Razoky	ATSU	480-219-6184		krazoky@atsu.edu
Daniel Tan	LLU	909-558-4640		datan@llu.edu
Ron Forde	LLU	909-528-7673		rforde@llu.edu
Jay Morrow	MUCDM	60602-509-2141		jmorro@midwestern.edu
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**2012 NATIONAL CODE AGENDA  
REGION I  
SUMMARY RESPONSES TO NATIONAL AGENDA**

**(Editor Note: Questions condensed for printing purposes)**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**NO REGIONAL SUMMARY RESPONSES SUBMITTED**

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

- I. MILLENNIAL IMPACT**
- II. DIGITAL DENTISTRY**
- III. RESTORATIVE DENTISTRY**
- IV. SCHOLASTIC**
- V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**
- VI. REGIONAL CODE AGENDA**

## 2012 NATIONAL CODE AGENDA

(Evidence cited where applicable)

November 29 - 30, 2012

Report on the proceedings of CODE Region I

Haisch LD (ed.) Code Regional Annual Reports 2012

<http://www.unmc.edu/code/>

### Region I School Abbreviations

UAB	University of Alberta	ROSE	Roseman University -Utah
ATSU	Arizona School of Dentistry	UOP	University of the Pacific
MID	Midwestern University College	UCLA	University of California - LA
UBC	University of British Columbia	UCSF	University of California - SF
LLU	Loma Linda University	USC	University of Southern California
UNLV	University of Nevada	WUHS	Western University
OHSU	Oregon School of Dentistry	UWA	University of Washington

## GENERATION Y/MILLENNIAL DENTAL STUDENTS

### Background:

During a recent ADEA (American Dental Education Association) board meeting in Washington, D.C., 40 millennial dental students discussed their perceived strengths and weaknesses and other trends to shed light on how schools can provide better dental education. Millennials are those students born between 1979 and 1994. The dental students said they use technology constantly to access information, conduct business and stay in touch, and that the Internet, text messaging, digital music, and downloads were all vital to their lives. The students expressed a preference for the ease of use of technology, but wanted to ensure that personal interaction remained a key part of their learning experiences. Many students indicated that their best academic experiences were those that involved a great deal of hands-on learning and allowed them to study in a group setting. The students also felt strongly that the best professors were those who care whether students were learning class materials, rather than just memorizing them, and those who made themselves available for help when necessary.

### Millennial Generation (Generation Y):

1. **Definition:** a term used to refer to the generation, born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.
2. **Common Traits:**
  - **Tech-Savvy:** Generation Y grew up with technology and rely on it to perform their jobs better. Armed with BlackBerrys, laptops, cellphones, and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through e-mail and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations.
  - **Family-Centric:** The fast-track has lost much of its appeal for Generation Y who is willing to trade high pay for fewer billable hours, flexible schedules and a better work/life balance. While older generations may view this attitude as narcissistic or lacking commitment, discipline and drive, Generation Y have a different vision of workplace expectations and prioritize family over work.
  - **Achievement-Oriented:** Nurtured and pampered by parents who did not want to make the mistakes of the previous generation, Generation Y is confident, ambitious, and achievement-oriented. They have high expectations of their employers, seek out new challenges and are not afraid to question authority. Generation Y wants meaningful work and a solid learning curve.
  - **Team-oriented:** As children, Generation Y participated in team sports play groups, and

other group activities. They value teamwork and seek the input and affirmation of others. Part of a no-person-left-behind generation, Generation Y is loyal, committed and wants to be included and involved.

- **Attention-Craving:** Generation Y craves attention in the forms of feedback and guidance. They appreciate being kept in the loop and seek frequent praise and reassurance. Generation Y may benefit greatly from mentors who can help guide and develop their young career.

## I. MILLENNIAL IMPACT

### A. Classroom/Didactic Experiences

1. Has the way your department teaches the didactic component of restorative dentistry theory or concepts changed significantly in the last 10-12 years? (e.g. traditional class lectures replaced with small group discussion session, or most of the didactic curriculum is delivered on-line).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**UAB** Lectures are required to be in PowerPoint departmental format and posted before lectures on our faculty web site. Students are required to bring their laptop to all activities utilizing University WiFi access. Students are required to purchase a textbook bookself from Vital Source and therefore can access information readily during all activities. Tech-savy student want their information in digital form and all information must be correct, current and readily accessible.

**ATSU** We do everything electronically. We have a staff support educational specialist who is responsible for posting the material and uploading exams for the students. All the teaching material is posted on Black Board (BB). The exams are given one electronically and one on paper. Videos on iTunes. All the books are provided to the students through vital source. We mainly teach in class; we incorporate group projects and small group discussion in some of the modules, usually about 10-25% of the module work load. We do have very few that are not in class; all the materials are recorded with Cantisia and provided to the students as self-study with Q & A sessions. All the students must earn a certificate in public health. They take 5 classes online. All the students should submit evaluations for each course within 48 hours when the course is over before we release the final grade. Even though we did not have any changes, surprisingly, the feedback reflects that many students prefer in-class teaching and having somebody in class teaching rather than listening to a recorded lecture. For the last 3 years, we have implemented Echo 360 (a technology that records all the lectures while it is given in class, so that students can listen to it when they review it or if they miss class). Currently we do not have mandatory attendance to lectures; however we still have at least 85 - 90% attendance for lectures. We are in the process of moving from BB 8 to BB 9.1. We also changed our exams from responses to exam soft. Also our IT department is in the process of testing BB 10.

<b>MUC</b>	Yes. We giving the theory in lecture, and giving the concepts of preparations in the Simulation Clinic immediately before the daily projects. The students take a short quiz on the parameters of the daily project before they begin their work for the day. Additionally, all projects are related to a patient case that is used in both lecture and simulation.
<b>UBC</b>	<p>Yes, we: a) have a PBL-hybrid curriculum; b) in Operative, we have active learning through the session either by iClickers or in-class assignments; and c) have group projects, e.g. Community of inquiry, ePortfolios, Virtual International Learning Communities, special interest papers.</p> <p>The students: (a) will challenge; (b). are not comfortable with criticism, they prefer “does not meet expectations” rather than fail; and c). thrive on positive feedback.</p> <p>1) PBL curriculum adopted in 1996; 2) moved from a “patient centered” clinic to a “student centered” clinic; 3) new Oral Health Centre completely on-line and digitized; 4) established a clinical tract with primary focus as teaching; 5) the yearlong Faculty Certificate Program (FCP) - 20 faculty have completed; 6) created and filled an “educationalist” tenure track position - primary focus research in dental education; 7) several educators now have Masters of Education.</p>
<b>LLU</b>	Traditional lecture format mostly. Removable Pros is divided into smaller group sections for more teacher/student interactions.
<b>UNLV</b>	The didactic component of restorative dentistry theory and concepts continues to be taught in the simulation lab. It is the simulation portion that has changed.
<b>OHSU</b>	Course materials are now online for students to access. New software has allowed us to move toward our goal of becoming paperless. We intend to utilize Examsoft for conducting examinations online. A strong effort is made to identify early students who are struggling and provide them with support. Support may include individual instruction by faculty or student mentor. The Simulation Clinic has simply expanded the student’s learning experience and our methods of teaching from traditional instruction to the bench top.
<b>ROSE</b>	<p>Use a “non-traditional” block system of instruction and learning. We are in our second year of student instruction. We do have some small group discussions, all instructional material is online for student perusal, but we also continue lectures. Lectures are encourages to be more “interactive”, instead of “Stage on stage.”</p> <p>Block instruction-one project, team break-out sessions for problem solving and student collaborations, frequent (bi-weekly) summative assessments, immediate remediation, and summer remediation. Putting all instructional material online. More videos, since they are easier to construct in the digital age. The College of Dental Medicine is expected to follow he Universities education model which, as previously stated, is a block method with a high level of technology availability and limited faculty</p>
<b>UOP</b>	No
<b>UCLA</b>	Our format remains the same with traditional lectures; however, all power-point presentations are not made available on-line prior to each lecture. More material is included on the slides as the students have then to reference in the future as opposed to only seeing them one in class. We have not gone to small group discussions to disseminate the initial exposure to the necessary information as we just don’t have the faculty to do this and one lecture is still the most effective way to present the information to a large group of students. Availability of presentations on-line was made primarily due to technology advancement and philosophy of school leaders.

**UCSF** Didactic curricula are available online and still given in lecture format, but the lecture structure has changed. It is broken up more - mixing digital videos and step-by-step exercises with access to educational resources simultaneously. Students prefer working independently and accessing educational resources when they want it; not when the professors thought it was most relevant. Student learners learn more by making mistakes rather than following directions

**USC** Yes. Didactic concerns are taught using multiple approaches. We have PBL, small group discussions for some of the material. The majority is taught in a traditional lecture format. However, in most of the classes, the presentations are made available electronically. Some of the classes utilize short videos that are also made available to students electronically.

**WUHS** Caters to the millennium generation from the inception of the program:

- a. Small group discussions (PBL) for inter-professional education: our curriculum is very active in IPE where groups of students from all colleges participate in case presentation and its relevance to each health care discipline
- b. Other small group modes of teaching:
  - i. Periodontal Curriculum (review of cases, given a particular description students participate in diagnosis, prognosis and plan of treatment)
  - ii. Clinical Care Seminars: Treatment planning discussions of D3's and D4's
  - iii. Community based Dental Education: (D1) Intro to Public Health: small group discussions and presentations on public health issues, access to care, etc.
- c. A good percentage of courses are still taught in the traditional class lecture modality

Online Curriculum:

- a. Local anesthesia module
- b. Medical emergencies (developing stage)

QUBE PLATFORM SOFTWARE; (Stanford) - in developing stage- Radiology module (Panoramic Radiography)

E Human (Loma Linda): 3D virtual tooth arrangement and set-up for removable prosthodontics; expected that by 2017 our Dental Anatomy module will be taught online

All our approach to academics is with the Millennium Generation in mind. Being a new institution, we have access to the latest technology and provide our students access to recordings of lectures, instant evaluation of project thru E VALUE.

Non-departmental set-up: there are no interdisciplinary departments, chairpersons. All the faculty of the College of Dental Medicine functions as a cohesive, interactive team under Essentials of Clinical Dentistry (EVCD) and Clinical Comprehensive Care Dentistry (CCCD). Dental curriculum is closely coordinated with interdisciplinary preclinical dental sciences training and basic sciences relevance. Faculty ratio is 6students to 1 faculty in both preclinical SIM experiences and Clinical Care, which allows for the close guidance and dedicated attention that this generation values.

**UWA** Yes. In the didactic class of restorative dentistry, traditional knowledge-based lectures have been changed to a more student-oriented base approach. Because the Millennial Generation has higher expectations in terms of learning and is encouraged to question authority, the content of the didactic lecture is designed to simulate the student's thinking and guide them in discussion instead of passively delivering the knowledge. At our school, most of the didactic curriculum and handouts have been delivered on-line. The knowledge content of the class is readily accessed by students via their laptop or iPad. The students can read the information prior to the class more flexibly without the restriction of time and place. The valuable time in class is more efficiently used to encourage students to discuss and question the content of the lecture. In some of our restorative dentistry classes, the quiz is delivered on-line and taken before class time. The quiz is designed to simulate a real clinical scenario and is accessible one day before the class. The students discuss the scenario in a small group before taking the quiz. The quiz is automatically graded after students have completed it. The students can learn their score immediately and access the suggested answers. The automatic quiz results provide a great tool for the course instructor to access the students' learning outcome. We are trying to implement the use of a university-wide teaching modality known as "Canvas" which allows for the previously listed teaching techniques.

#### **B. Pre-Clinical Laboratory Experiences**

1. Has the way your department teaches the pre-clinical laboratory component of restorative dentistry theory or concept changed significantly in the last 10-12 years? (e.g. traditional work benches replaced with high tech manikin labs or significant use of patient simulators, like DentSim).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**UAB** Since our move to a new clinic facility this fall and the purchase of new technologies, we are currently in the process of utilizing digital scanning then Compare software to assess preparations and restorations. Students want lots of feedback and this technology allows for rapid/objective feedback.

**ATSU** We started with high tech manikin; we keep upgrading the AV in the sim clinic (new Elmo annotation system), besides the individual screens we added big LED screens on the walls. We have a ceiling camera for demonstrations. All demonstrations in the sim clinic are recorded through Echo-360. The students prefer all the teaching material to be delivered electronically. No paper. 99% of their communication with faculty is through emails. With the availability of new technology, we update our system and try to make it easier and faster for the students to access teaching material.

**MUC** No. The clinics were established on a private practice, general dentistry concept. Students are taught to use E4D Cad - Cam, implant systems, and Diode lasers. MyPacs is used for radiographs.



<b>UBC</b>	<p>Yes:</p> <ol style="list-style-type: none"> <li>(1) Complete digital patient from the start of the sim - including digital radiographs, digital daily record.</li> <li>(2) Completely competency based (no large qualifying clinical exams)</li> <li>(3) For fast learners who are finished ahead of time - integration of patient care into simulation during catch-up sessions as the competencies and all clinical exercise are completed.</li> <li>(4) For fast learners - ability to work with senior students in the clinic during sim catch-up times if the competencies and all clinical exercises are completed.</li> <li>(5) For challenged students, a comprehensive remediation process is in place.</li> </ol>
<b>LLU</b>	<p>1<sup>st</sup> years students train on the ADEC manikin heads for Operative 1. Our 2<sup>nd</sup> and 3<sup>rd</sup> year pre-clinical (fixed and removable pros, Operative 2) are done bench top. 1<sup>st</sup> year students used to be trained using the old “head on a stick.” Cannot say that using the ADEC manikin heads make an easier transition into the clinic - no comparative studies done. It does seem that today’s students have better eye-hand coordination based on preclinical observation, possibly due to experiences with video games. The switch to using ADEC manikin heads was primarily due to remodeling and upgrading of the D1 laboratory.</p>
<b>UNLV</b>	<p>Although most restorative courses are traditionally taught in the sim lab, the use of hands-on demos through video and ELMO technology has increased. Anything visual. This generation is very visual. They really don’t use textbooks. Any technologically advanced media works well for them. They love the idea of digital radiographs, impression taking, and Cad - Cam. Obviously the availability of limited full time faculty play a role in needing to demonstrate procedures through video and real-time demonstrations which reduced the need for at-the-bench faculty demonstrations.</p>
<b>OHSU</b>	<p>The manikin head with typodont teeth is the present and near term method of teaching restorative procedures since new technologies, i.e. DentSim, are expensive. Cost is a factor. Millennium students are motivated by seeing the “big picture.” They also problem solve best in groups; require praise and encouragement, expect instant feedback; appreciate honesty and are very social. Setting ground rules and providing honest feedback is important. Students can benefit by working in small groups.</p>
<b>ROSE</b>	<p>The first year of preclinical instructions was performed in the clinic with a Darwin head simulator attached to the dental chair. The second year has the advantage of a new sim lab with the ADEC simulator and the Darwin head. High tech simulators such as DentSim are not an option at this time. We have been “forced” into a non-traditional block system of providing pre-clinical instruction and that has created some challenges for us. Generational changes have had less of an impact on the methods of pre-clinical instruction than beginning a new school and facility issues. Availability of better simulators and standards of “best practices” in laboratory teaching has probably had more effect than catering to generational characteristics. Technological innovations and contemporary techniques for providing dental care impact curriculum developments as much as any other tradition factors. One of the challenges we have is the cost to provide instruction with those innovations and techniques. However, we cannot ignore the impact of those modalities in preparing our students for when they graduate.</p>
<b>UOP</b>	<p>No</p>
<b>UCLA</b>	<p>Yes, use of manikin patient simulators (ADEC, not like DentSim). Installation of patient simulators was part of a major lab renovation.</p>

**UCSF** Yes, we use ADEC patient simulators which start our didactics with ergonomics. Students have more questions about practice flow, management, and ergonomics as a result. We are including more data sets on 3D images of teeth for students to manipulate and better understand the preparations.

**USC** No, we have been using simulators with manikins for over 12 years.  
**WUHS** From the very beginning, preclinical Sim has included the ADEC (Model #42L) and all preclinical skills are taught and demonstrated live. In addition, every procedure is recorded in short five to ten minute videos so the student can replay multiple times. These videos are posted on Sharepoint (Educational Management System) so the student may view the video the evening before they practice the actual procedure for the first time. Magna view camera allows us to demonstrate in real time different clinical skills and materials as they are able to follow on their terminals and perform on their mannequins. Different typodonts on the mannequin are used for different clinical disciplines:

ENDO: extracted teeth are mounted on a specific typodont (Accidental Model) that allows for working length digital radiographs. NOMAD portable x-ray units are used for endodontic.

PROSTH: edentulous typodonts to facilitate the removable aspect of Prosthetic Science.

OPERATIVE: procedures use Kilgore Typodonts.

Access to complete to digital information: library resources, complete digital library, PubMed.

The ultimate goal is to have our dental sciences curriculum directly connect and show relevance with our basic sciences plan. Integral to our training is critical thinking, preparation/planning, problem solving and self-assessment which are required during and after projects in sim clinic (lab) that follows during clinical training.

**UWA** Yes. The students of the Millennial Generation are achievement-oriented. They study hard and effectively, and have a better balance between work and family. Thus. The curriculum of the pre-clinical laboratory is designed to encourage students hands-on by practicing the assigned project in class. We perform in-class practice so that student's do not have to spend too much extra hours practicing on their own. In order to achieve that, the curriculum and handouts of most pre-clinical laboratory courses have been delivered on-line and are readily accessible and downloadable. The hands-on procedures are well documented, especially with the aid of digital photos. Students study the materials using their laptop or table computers on a more flexible schedule. The convenience of digital learning allows them to view the procedures multiple times. It helps students accomplish the assignment project efficiently in the laboratory class. In our pre-clinical laboratory, a simultaneous video system was introduced several years ago. Now there is a monitor at each work bench, so students can closely watch the demonstrated procedure being performed by the instructor. This facility was introduced because of the availability of this new technology and has little to do with the younger generation.

### **C. Clinical Experiences**

1. Has the way your department conducts clinical teaching of restorative dentistry changed significantly in the last 10-12 years? (e.g. discipline clinics replaced by general dentistry clinics, traditional clinical requirements abandoned for "activity points")
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations

compared to those from the late 1990's.

3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

<b>UAB</b>	We are moving away from a requirement driven model (students were in required discipline clinics) to a competency model (comprehensive care clinics). Changes are driven by a need for greater efficacy and by a lack of patients in some areas.
<b>ATSU</b>	We do have the comprehensive care unit general dentistry module and we have specialty clinic for more advanced cases. Since the school started, our clinical requirements were set so that the students have to pass a certain number of essential experiences before they do their competency and would differ from one student to another. We have daily grading of AIU (acceptable, improvable, unacceptable). As our students spend half of their D4 year in external rotations, the advanced technology helped us to offer better communication and calibration to the external site. Also helped us to follow on all the projects that the students perform in the external sites and getting a constructive feedback from the faculty.
<b>MUC</b>	No, the clinics were established on a private practice, general dentistry concept.
<b>UBC</b>	We have integrated clinics for at least the last 14 years (that's as far as our "elders" remember) so a change from discipline clinics happened before that. The only solo disciplines today are Orthodontics and Pediatric Dentistry. The one area that may be related to generational characteristics is the amount of resources we dedicate to remediation/individualized instruction. It is basically assumed that if they get admitted, they should be able to graduate, with very few exceptions. In the last ten years, we have moved away from "requirements" to recommended clinical experiences and expert opinion on achieved competencies in accordance with the ADEA/ACFD competency-based education world view.
<b>LLU</b>	Clinic is divided into groups of twenty students with a primary and secondary faculty per group. Clinic requirements are competency-based as well as points-based. Each procedure is allotted a certain point value and a minimum of points is required for graduation. The change to a clinical group setting was brought about primarily by discontent from the D4 students not having sufficient clinic instructor coverage under the old system. With the revamped system, the clinic was divided into smaller groups mentored by faculty members assigned to each group.
<b>UNLV</b>	With the exception of Endodontics and Advanced Oral Surgical procedures, all procedures are performed in the general dentistry clinics. Clinical requirements are set by required number of experiences and a separate competency exam. We were one of the first dental schools to go almost 100% paperless in both the classroom and the clinics. This decision has had the greatest impact on the current philosophy.
<b>OHSU</b>	Operative and Prosthetics have been combined into one Restorative Department. Urgent Care and Admitting are conducted in the small group practices. New restorative faculty are hired to work in the pre-clinic before they are allowed to work with students in the clinic.
<b>ROSE</b>	We are in the process of defining the clinical experiences for our students who will be introduced to the clinic sometime in the spring of 2013. Discussion and plans in the early formative stages with multiple questions and problems still to be resolved.
<b>UOP</b>	Yes.

- UCLA** Clinical teaching has not changed in how it is delivered, but we have modified what it takes to graduate. Instead of a large list of specific requirements, we have required a relatively small number of specific procedures to complete and then allow the students to accumulate the point necessary to graduate by completing the procedures that their patient pool requires, treating the whole patient instead of “my bridge patient” or whatever else the student required. Students are also able to pursue specific areas on interest in Restorative Dentistry to accumulate these points. Graduation is based on doing a broad variety of restorative procedures, passing ten competency exams on clinical procedures and finally passing an overall competency examination. These changes have been implemented in the last 10- 12 years. None of the changes previously described fall into this category. Changes reflect a nationwide move to competency-based curricula.
- UCSF** Yes, there have been significant changes in the clinical teaching of restorative dentistry. Some instructors feel that grading students negatively will affect their promotion (denied by the administration). Nobody fails an exam, all grades are pass/fail and everyone gets a trophy regardless how many times they are reexamined. Students have no requirement, only minimal number of “educational experiences”. Most clinical experience is out-sourced to community clinics where supervision is half-hazard. Production dollars are as important as the quality of restoration for graduation, The amount of clinical experience necessary has declined significantly in the last 10- - 15 years. The gulf between administration, research faculty, and clinical faculty has widened significantly in that same time period. Curriculum has streamlined and repetition had been significantly reduced. Learning has suffered as a result.
- USC** No, however, we have changed the terms. Experience units rather than requirements. We also have fewer specific experience units that need to be accomplished.
- WUHS** Clinical training follows a model of a General Practice setting. Each class is divided into 4 groups, to be supervised by a Clinical Managing Partner and each group has 2 Team Leader faculty. There are no clinical departments; instead all specialty disciplines are managed in the clinical group. Specialists from all disciplines are available on the clinical floor for guidance, consultation and evaluation/grading. There are specific consultation requirements for each specialist that need to be completed PRIOR to the specialist consultation with the patient and student provider. Our specialist team consists of 2 endodontists, 3 prosthodontists, 1 oral surgeon, 3 pedodontists, 3 periodontists, and up to 40 general dentists who often handle also specialized cases as one does in general practice. Since our program does not have a graduate program yet on any discipline, our students are exposed to multiple specialty experiences that allow them to be competent and proficient in disciplines like molar endos, surgical extractions and simple impactions. Because our program is set up as a general practice competency model, there are no numerical clinical requirements. All patients accepted into our clinic are treatment planned for comprehensive care.

The student provider assigned is expected to complete all care necessary to restore his/her patient's oral health. Students are assessed on different procedures through clinical skill exams. There are 18 clinical skill exams required: Periodontal Data Collection, Treatment Planning, Comprehensive Oral Evaluation Data Collection, Periodontal Scaling and Root Planning, Acute Care, Class II Composite and Amalgam, Class III Composite, Non-Surgical Extraction, Single Unit PFM or Gold Crown, Endo, Complex Restoration, Pediatric Comprehensive Oral Evaluation, Pediatric Restoration (2+ surfaces, or SSC), Complete Dentures, Fixed Partial Denture and Removable Partial Denture. In addition, there are simulated clinical skills evaluations to be completed: Medical Emergencies, Mock WREB Restorative, Mock WREB Periodontal, Oral Medicine/Pathology, Space Management and Malocclusion, and Special Needs. Paperless/digital set-up of clinical charts. Digital radiography and photography. 3D Cone beam available. Electronic grading/assessment through EValue via smart phones or Ipads. In community based clinics. Faculty to student ratio is 1:6 in clinic. Our university was founded on the foundation of science, compassion, and humanism. In addition to having a sound and rigorous basic science, preclinical and clinical training, community outreach programs are mandatory for our students. CBDE: Community Based Dental Education curriculum starts at D1 with an introduction to Public Health. Students are exposed to several issues affecting access to care and delivery systems. Students are evaluated on their participation in small group discussions and presentations. After the first semester, students participate in education programs at WIC, the Regional Center serving special needs patients, Early Headstart, Special Olympics, different school-based dental clinics in El Monte and Pomona and GKAS. We are also regular participants in Harbor CARE LA massive free dental clinic in the Los Angeles sports arena. Depending on their stage in dental training, students provide oral health education, screenings, prevention and comprehensive care. D4 students participate in 4 week rotation at different sites in southern California. Students are engaged in the dental care of patient in clinical sites assigned and as part of their final evaluation, they submit a clinical case that they either worked up or completed during rotation.

**UWA**

Yes. Digital radiographic imaging and digital photographs are widely used in clinical teaching. The digital images can be taken and downloaded immediately onto the computer at the chair side. For the implant and surgical plan of the implant procedure, the CT scan images allow the students to view the three dimensional image and learn how to create a treatment plan for the implant position and design the future restoration. The digital intraoral scanner and CAD/CAM restorations have been widely applied in clinic. Because the Millennial Generation grew up with technology, it is easy for them to learn and operate the software to digitally scan and design the restorations on the computer screen. This hands-on learning experience motivates the students to further study the new technology application in dentistry

. In our clinic, all the chart notes, x-rays, and clinical photos are now completely digital. It has saved a tremendous amount of the paperwork. The clinic instructors can grade the students' clinical performances using computers. For the students of the younger generation, this electronic system can be learned quickly. The electronic dental record is the main trend in dentistry. The students' experience in the pre-doctoral clinic helps them smoothly transition into their future work. We are trying to make the clinical experience to be more like what dentists do in their general practice. The clinic will become more like general practice. Further changes are being guided and will be implemented in the near future.

## **II. DIGITAL DENTISTRY**

- A. Has your school incorporated digital dentistry as impression taking, model formation, CAD-CAM, etc.?
- B. Which technologies are you using? Please name the brands.
- C. What have been your experiences with these technologies?
- D. To what degree are they used in the teaching program?
- E. Has this technology had a positive or negative impact on clinic income?
- F. Are all interested faculty trained or is there a specific "digital guru"?
- G. Has it replaced conventional techniques or does it augment conventional techniques?
- H. What is the response from the students?
- J. Are intraoral digital impressions taken or conventional impressions which are scanned afterwards?
- K. Do the students realistically have enough time to totally complete a restoration from preparation to cementation in a single appointment (morning or afternoon session)?
- L. Please indicate the time length of a morning or afternoon clinic session.

**UAB** Yes. Lava digital impressions (3M), Cad-Cam (E4D). We are just introducing these systems. At this time we are beta testing how these systems will be utilized. It is too soon to comment on the impact on clinic income. Most staff are keenly interested, but initially a few faculty are trained and will be responsible to train students/staff; then supervise lab and clinic use. It is too soon to comment on whether these will replace or augment conventional techniques. The students are extremely positive. We are not scanning impression at this time. We are still training the students with simulations. Lava digital impressions (3M), CAD/CAM, E4D.

**ATSU** Yes, we have 8 CEREC units in the school. The students start learning about the technology in their second year in the sim clinic. They have to design at least 3 crowns and 1 onlay. They need to mill 2 units and cement them. In addition, the students go through a lab rotation in their third and fourth year and they design 3 - 4 units and mill one. We also use it to make surgical guides using and provisional. It has been used in the clinic but there are some limitations like case selection and faculty availability. We also have iTero, the digital impression, but it is not widely used. I think it is essential to teach this technology to the students. They like it and learn how to use it very fast and like to apply the technology.

Adding all the new technology to the curriculum and giving the students the opportunity to apply it in dental school will make them better dentists and will help them in their professional life to have better chances to proceed in advanced educations. With surgical guides, about 150 cases. We are not up to determining impact. It is not big enough to determine the impact. Unfortunately not all the faculty who were trained used the technology, just because time is of a concern. We do have 2 main faculty members who have the leads on this technology in the clinic. No the technology did not replace conventional technique which is the main technique that we use in the clinic. All the students are very open to try and use a new technology when it is possible and we do have an external rotation which is a mobile clinic called “The Dora Program” to reach underserved communities in their home and provide the services. CAD/CAM played an essential role in providing these services as the students can provide permanent restorations in one visit. Impressions: most we do the 2 steps a conventional impression is taken to be scanned. It is hard to have a faculty available to work with the students on the CEREC units as the availability of one faculty is limited to one student. Certain students are well trained and feel comfortable using the CAD/CAM system. They schedule both AM and PM sessions and deliver the restoration in one day after they arrange that with the faculty. 8:30 - 12:00 PM, morning session. 1:00 - 4:30 PM afternoon sessions. D3s are in the clinic 4 ½ days a week. D4s are in the clinic 5 days a week.

**MUC** Yes. E4D. Good, the company is very supportive. Preclinical and clinically. Neither impact on clinical income.. All faculty are trained, however, there are some who are more expert than others. This technology augments conventional techniques. The students are extremely positive. Both intraoral digital and conventional impressions are scanned. Yes, students have enough time. Time length is 3 hours.

**UBC** Yes, CAD - CAM (CEREC). Positive , but difficult to implement in patient care so far. An elective in simulation setting is offered to six 4<sup>th</sup> year students in the spring. Rare patient care. There is a :guru” and we have plans for part time faculty who are using CEREC to help support the use by trained students. Technology minimally implanted, so minimal impact. The students are very positive and enthusiastic. They wish they could use it for patient care. I would assume no, especially if e.max is used. However, the new Lava ultimate blocks may shorten the time required. So far we recommend booking a patient in the morning with an option to complete after lunch time. Still a rare activity. Time length is 3 hours.

**LLU** Section on CEREC design and fabrication during the D2 year in the Fixed Pros course. Limited number done clinically. Still evaluation. Most clinical crown bridge is still done traditionally. Essentially an introduction to the technique. Minimal at this time. No impact at this time, since only a limited number have been done. Restorative faculty attended a 3-day hands-on seminar. Out Central Lab has a trained technician to fabricate the CEREC crowns. No, it has not replaced conventional techniques. Unsure of student response. Conventional impressions are taken and the dies scanned afterwards. Appointments are still at least two separate appointments. Time length is 4 hours per session.

**UNLV** We are in the process of incorporating both digital impression taking and CAD/CAM into both out sim lab and clinics. We are working on contractual arrangements with labs and manufacturers. ITero, E4D, CEREC. Nothing yet.

<b>OHSU</b>	Yes. CEREC system. Provides a CAD/CAM experience for students utilizing CEREC. First year students scan two crown preparations. DS-2 students do crown preparations, digital impressions and provisional in the pre-clinic during 5 lab sessions. DS-3's may choose to take a 16 hour elective course that qualifies then to do CAD/CAM restorations in the clinic as a DS-4. Qualified DS-4's prep, scan and provisionalize at one appointment and seat the restoration at a subsequent visit. The school presently has 8 red CAM/s that were donated by an alumni when they upgraded to the Blue-ray or Omicam.
<b>ROSE</b>	Not at this time, however, we have been investigating the possibilities and have high expectations, if the funds become available. The university has as one of its goals "innovative education models," so we believe the support will be there. We intend to set these modalities as a high priority. Chair-side impression, design and fabrication planned. Most faculty are interested when the technology is acquired. No information available at this time. Planned 8:00 - 12:00 PM and 1:00 - 5:00 PM.
<b>UOP</b>	Yes. E4D, Lava COS, ITero. Favorable. Introduced in block rotation in first year. Positive impact, reduced costs in materials. We have a Director of Technology. We use intraoral digital impressions. The students do not have enough time. Time length is 4 hours for morning and 3 hours for afternoon..
<b>UCLA</b>	Yes, recently. CEREC system. It's too early, but positive so far and enthusiastically received by students. We are introducing digital dentistry in the D2 preclinical course with an overview of available systems. D3 and D4 students have the opportunity for hands-on CEREC training, sessions are offered one evening per week. Upon completion of training, students can use the system in the clinic. At this point, most of the student CEREC cases are requiring two appointments in as much as the system has only been recently introduced and none of the trained students have accumulated experience with multiple cases. We are exclusively using IPS e.max CAD blocks which are fabricated in a "soft" intermediate state (and are blue in color). The milled restoration is tried in and adjusted in this state, then subjected to a 20 minute "crystallization" firing to attain the final physical and shade properties. Starting in summer 2013, plans are to require each new D3 student to complete a CEREC procedure in the sim lab in small groups during the evening. Too early to tell impact. Training is being provided to an initial cohort of about 12 full-time and part-time faculty. We expect that additional faculty will be trained as the use of CERE becomes more mainstream. This technology augments conventional techniques. Students are very enthusiastic! They are fast learners. We are routinely doing intraoral digital impressions but are often making conventional (triple tray) impressions as a back-up and to check the fit of the milled restoration if there is any concern about the quality of the digital impression. We expect that the back-up impressions will be unnecessary as users get over the learning curve hump. At this point, no the student don't have enough time. Time length is 3 hours.



<b>UCSF</b>	<p>Yes, we have a fully integrated CAD/CAM program where digital imagers are made by the students using the software tools. CEREC, Redcam and Bluecam with 3.85 software. Very positive. Unanticipated benefits with teaching have occurred. Students very receptive to using the technology and take more “ownership” of their results. Self-assessment and portfolio exercises enhance the use of this technology. Used from D1 through D2 and throughout clinic operations. Too early to tell impact due to limited cases of the clinical cases completed; positive instructor feedback and good clinical outcome. All interested faculty have been trained. There is an issue getting faculty to trust the technology and thus be interested enough to be trained. We also have a Director of CAD and a Director of Clinical CAD along with 12 faculty who are competent to teach it. This technology augments regular impression techniques in specific clinical situations that are decided upon by the faculty and along with written clinical guidelines. Student response is overwhelming positive. With the appropriate case, digital images are solely relied on. We checked with the manufacturer and they suggested that the result would be more accurate with straight digital imaging rather than indirect techniques. No the students don’t have enough time. We break up the delivery on a second visit after all protocols and steps are completed satisfactorily. Time length is 3.5 hours.</p>
<b>USC</b>	<p>Yes. CEREC, Itero, 3M Lava COS, E4D. When used correctly, the result can be excellent. Approximately 10 - 12% of indirect restoration are being done with CAD/CAM technology. Digital impression procedures have been decreased. Positive impact, but I was unable to quantify the amount. Digital Guru; limited time for training. This technology augments. Most of our indirect restorations are still done with traditional impression, lab-fabricated restorations. Most students like CAD/CAM as turn-around time is much less, cost is less, and they do not have to do as many lab procedures (even though the amount of lab procedures done by students is very minimal - mounting casts, trimming dies and filling out the lab Rx). Both intraoral digital and conventional impressions are scanned. No the students do not have enough time. Time length is 3.5 hours.</p>
<b>WUHS</b>	<p>CEREC introduction and preclinical training has been introduced in sim lab and will be progressively introduced to clinical sciences. At the moment, there are no digital impressions taken, rather conventional impression of preparations are taken, poured in reflective stone and then scanned. Minimal experience, phasing into clinical training. Minimal experience, phasing into clinical training. Not enough experience to cause an impact. At the moment, there are 7 faculty members with experience in CEREC technology. All faculty were introduced to the technology before it was introduced formally to students as part of their ECD curriculum. At the moment. It has not replaced conventional procedures; operative, crown and bridge are rendered through the traditional preparation and impression techniques. Students are very excited to learn the technique and embrace it. In their words,” can’t wait!” to have their first case completed at clinic. Conventional impressions are taken, poured in reflective stone and then scanned. Our students plan for the process to take 2 dental appointments. 8:00 - 11:30 AM, 1:00 - 4:30 PM. IN the process of considering evening sessions.</p>

**UWA** Yes. Digital impression systems: ITero intraoral scanner (Cadent); COS, chair side intraoral scanner (3M ESPE). CAD/CAM systems: 3Shape scanner (3 Shape); NobelProcera scanner (NobelBiocare); LAVA scanner (3M ESPE). We feel comfortable operating the CAD/CAM technology systems and apply them to certain kinds of procedures in our pre-doctoral clinic. For instance, The CAD/CAM all ceramic restoration improves the esthetic outcome for the restoration, especially in the esthetic zone. The CAD/CAM technology is also applied to virtually designing and fabricating the implant custom abutments. It not only improves the fit of the abutments to the implants but also provides us with better control of the angulation and contour of the abutments. For the CAD/CAM technology systems, students learn how to digitally scan the models, operate the software and virtual design the restorations and custom implant abutments on the computer screen. However, the models which are used to scan and design are for teaching purposes, not for real clinical cases. The real clinical cases are still sent to the collaborative laboratories to fabricate the definitive restorations after the traditional final impressions are taken. After the models are scanned and contour of the definitive restorations are designed, the images are sent back to students by email to confirm the design is correct before the definitive restoration is fabricated by the CAM milling machine. Thus, the students have opportunities to get involved in the design process of the restorations. The digital impression technology is only being used in the teaching and learning level and hasn't been routinely integrated into the pre-doctoral clinic yet. I believe the impact has been positive because the accuracy of the restorations reduces chair time and also the material cost is less than traditional gold material. There is a training opportunity for all faculty interested in digital dentistry. In our pre-doctoral clinic, the digital dentistry has been applied in some specific situations, such as all ceramic restorations for anterior teeth and custom implant abutments. However, it has not totally replaced conventional techniques. Because the students grew up with technology, they are excited and feel comfortable learning digital dentistry. However, it doesn't impede their desire to learn the conventional techniques. The digital dentistry augments, rather than limits, their learning experience. We still use conventional impression to fabricate the model and scan it afterwards in our pre-doctoral clinic. In our pre-doctoral clinic, the student performs the tooth preparation and conventional impressions. The definitive restorations are digitally scanned and fabricated by the collaborative laboratories. It's not realistic to provide students enough time from preparation to cementation in a single appointment, especially when they are still in the learning curve. Morning clinic session: 9:30 - 12:00 PM; afternoon clinic session: 1:30 - 4:00 PM.

### **III. RESTORATIVE DENTISTRY**

A. Are operative procedures in the clinics done the same way as taught in pre-clinics?

**UAB** That is the goal as far as

<b>ATSU</b>	95% yes
<b>MUC</b>	Yes
<b>UBC</b>	Yes. Our pre-clinic procedures are actually done in the clinic setting.
<b>LLU</b>	Hopefully, yes. Some variation in treatment/philosophy introduced by clinic faculty, which might not necessarily be a negative
<b>UNLV</b>	There is definitely an UNLV way of doing things. However, this doesn't always trickle down to our part-time faculty
<b>OHSU</b>	The goal is to calibrate the faculty so there is consistency in procedures from the pre-clinic to clinic. New faculty are assigned to the pre-clinic and rotate through the sequence of restorative courses before working in the clinic
<b>ROSE</b>	As a general rule, we hope that they will be. Obviously faculty calibration is a huge issue
<b>UOP</b>	Yes.
<b>UCLA</b>	Yes
<b>UCSF</b>	For the most part they are. Our operative instructors have all taught in the pre-clinic operative or have gone through a calibration by attending the lectures when they first start.
<b>USC</b>	Generally yes, however, some faculty do not know or do not follow the criteria as taught in the pre-clinic classes
<b>WUHS</b>	Yes.
<b>UWA</b>	Yes.

**B. Are the same materials, instruments and burs used?**

<b>UAB</b>	Yes
<b>ATSU</b>	Yes, there are extra brands in the clinic but the main materials are the same
<b>MUC</b>	Yes
<b>UBC</b>	Yes
<b>LLU</b>	Yes. Students have their own cassette of instruments that are used in their pre-clinical labs. We supply all the clinical instruments and materials to assure proper sterilization and no cross-contamination.
<b>UNLV</b>	Yes
<b>OHSU</b>	No response submitted
<b>ROSE</b>	Our pre-clinical plans are to provide instrumentation and materials that will be used in the clinic. We are strong on that standardization.
<b>UOP</b>	Yes
<b>UCLA</b>	Yes
<b>UCSF</b>	Yes they are, especially since the students own their own kits which are used in the pre-clinical courses.
<b>USC</b>	Generally yes. Minor exceptions.
<b>WUHS</b>	Yes
<b>UWA</b>	Yes

**C. If there are differences, how are they reconciled?**

<b>UAB</b>	No response submitted
<b>ATSU</b>	IF there is any difference, we do have an material and instrument committee who will look to resolve the differences.
<b>MUC</b>	No response submitted
<b>UBC</b>	Not applicable

<b>LLU</b>	Staff meetings and general email messages from the Associate Dean of Clinic Affairs
<b>UNLV</b>	No
<b>OHSU</b>	No response submitted
<b>ROSE</b>	We are hoping to avoid differences. But, as new and better materials come to the market, or better techniques are developed, we plan to modify in both the pre-clinic and clinic.
<b>UOP</b>	No response submitted
<b>UCLA</b>	Not applicable
<b>UCSF</b>	If differences exist, then the clinical faculty on the floor has the right to teach the different technique. If there are quality outcome issues, then our Division Chair for Patient Care meets with the faculty to correct or discuss. We also have inter-session trainings for faculty.
<b>USC</b>	Not reconciled. Difference is not significant.
<b>WUHS</b>	Regular weekly meetings with Clinical Managing Partners and Team Leader Faculty are attended by specialists, pre-clinical Curriculum Director, or the administration to provide an opportunity to discuss and come to agreements on different techniques and technologies. In addition, we have monthly meetings where EDC (pre-clinical faculty) meet with clinical faculty in order to keep the pre-clinical to clinical transition as seamlessly and smoothly as possible.
<b>UWA</b>	The operative procedure taught in pre-clinics is also used in our pre-doctoral clinics.

D. What methods/systems are taught for polishing composites?

<b>UAB</b>	We use finishing diamonds, finishing burs, white stones, enhance points, and a finishing sealer for polishing composites.
<b>ATSU</b>	We teach using diamond burs. We do not use carbide and using impregnated rubber cups and cones, jiffy brushes and Soflex disks for polishing composites.
<b>MUC</b>	We use finishing burs, Astropol polishing system and polishing paste for polishing composites
<b>UBC</b>	Contouring with high speed fine diamond and carbide multi-fluted burs, final polishing with Brasseler rubber wheels, cups and tips.
<b>LLU</b>	Finishing burs followed by 3M polishing discs and final polishing with either the Jiffy system (yellow cup/brush) or the Kerr system (blue and gray cups
<b>UNLV</b>	We use disposables in the form of fine diamonds, carbide finishing burs, cups, and brushes. We enforce the use of surface sealants like Biscover
<b>OHSU</b>	For polishing composite, we use finishing carbides, discs, Enhance, PoGo, and Jiffy brushes.
<b>ROSE</b>	For polishing composite, Jiffy system of composite polisher from Ultradent and abrasive discs, strips from Komet.
<b>UOP</b>	For polishing composite, we use finishing carbides/abrasive polishers.
<b>UCLA</b>	For polishing composite, we use Jiffy points/cups/discs (Ultradent) and Optidiscs (Kerr).
<b>UCSF</b>	Polishing is done with Soflex discs, rubber abrasive points or cups, and Jiffy brushes.
<b>USC</b>	For polishing composite, we use Soflex discs, Shofu points, occlusal brushes.
<b>WUHS</b>	For polishing composite, we use Diacomp (system (Brasseler), Ultradent polishing discs, carbide polishing burs.
<b>UWA</b>	There are two systems which are taught: Diacomps (Brassier) and PoGo (Dentsply).

E. Are any bulk fill composite techniques taught? If yes, please describe.

<b>UAB</b>	No
<b>ATSU</b>	We teach small increments techniques. We teach the use of the vibration technique to avoid air bubbles and porosity, also multi-layer technique to allow for color buildup.
<b>MUC</b>	No
<b>UBC</b>	No. The biomaterials research does not support it.
<b>LLU</b>	No
<b>UNLV</b>	No
<b>OHSU</b>	Not currently taught.
<b>ROSE</b>	No, not at the present time.
<b>UOP</b>	In clinical trials researching Sonicfill composite system.
<b>UCLA</b>	No
<b>UCSF</b>	Not at the moment due to equipment and financial constraints as well as rearranging the curriculum (finding time to teach). This year we have a new exercise where we are introducing this in the pre-clinical curriculum.
<b>USC</b>	No
<b>WUHS</b>	Not taught. Students are trained in (oblique) layered techniques. Polymerization shrinkage, cuspal flexure, stress on restoration tooth structure and final anatomy are concerns limiting factors, with bulk fill technique.
<b>UWA</b>	Only incremental fill composite technique is taught in our pre-doctoral clinic.

F. Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? What about new techniques – how long to implement into pre-clinic labs and clinics?

<b>UAB</b>	Once a change has been approved, the new materials and training are usually done within a short time frame.
<b>ATSU</b>	We work so fast, anything that needs to be approved by the CC or the material committee never takes more than 2 weeks before the material and technique can be introduced.
<b>MUC</b>	New materials are implemented immediately into the sim clinic and clinics.
<b>UBC</b>	As soon as they can be ordered. The same materials are used in pre-clinic as in Clinic.
<b>LLU</b>	New materials are presented to the restorative faculty for approval, then submitted to the Issues/Materials Committee for final approval prior to clinic implementation (after the current supply has been used up).
<b>UNLV</b>	The new materials are initially incorporated into the pre-clinical lab , and then the clinics. So there may be lag time of as much as 1 year. In some instances, new materials may be incorporated earlier into teams where the Team Leader provides instruction on use and technique to the students on that team.
<b>OHSU</b>	New materials and procedures are reviewed by committee and it takes time to implement.
<b>ROSE</b>	Being a new school, we have not really faced this problem of new materials yet. Our problem is that we don't have a material committee per se, but from previous experience I would surmise that changes would take place in a curriculum cycle for pre-clinic instruction , but could change much quicker in the clinic situation.
<b>UOP</b>	Time frame for material within 4 - 6 months. Implementation depends on what is the trigger for the change.

<b>UCLA</b>	Changes are implemented as soon as the next available opportunity in the pre-clinical curriculum occurs.
<b>UCSF</b>	It takes a full year ahead which makes it difficult to develop or introduce new techniques or items in the curriculum.
<b>USC</b>	Can't tell an exact time frame for changes. Usually it is not quick and takes a while.
<b>WUHS</b>	Changes happen quickly here. Once new materials or instruments have been reviewed by Curriculum Committee and have been approved by the Deans and budgeted the pre-clinical and clinical faculty are introduced into the new materials, techniques and reasons supporting the change.
<b>UWA</b>	It usually takes 6 months to 1 year to implement the use of new materials.

#### IV. SCHOLASTIC

##### A. What is considered scholarly activity at your institution?

<b>UAB</b>	Research, serving on committees (internal and external), supervising student research and publishing within the dental community.
<b>ATSU</b>	Research and publication
<b>MUC</b>	Research grants and projects, publications, presentation, journal reviewer, chair/moderator of meetings/symposia, membership in honorary societies, service on editorial boards, service on grant study sections.
<b>UBC</b>	Research of quality and significance or in appropriate fields, distinguished creative, or professional work of a scholarly nature; and the dissemination of the results of that scholarly activity.
<b>LLU</b>	Our faculty have the choice of three tracks: Academic, Clinical, and Research. Each track is subdivided into four levels: Instructor, Assistant Professor, Associate Professor, and Professor. There are promotion criteria for advancement from one level to the next based on scholarly activity, teaching and service (e.g., a combination of success, strength, and/or excellence in each area). Additionally, there is a requirement of maintaining a minimum FTE within each level prior to consideration for advancement.

#### **UNLV Guidelines for Promotion or Appointment for Academic Faculty.**

- 1.3.1 The following guidelines should be used for recommendations regarding appointment to academic rank and for promotions in academic ranks. Eligibility for promotion is evaluated by reference to certain essential requirements and evaluation of certain other specified desirable accomplishments.
- 1.3.2 **General Considerations for Appointment or Promotion With Regard to Rank**  
*Excellence in Teaching, Research and Service.* The UNLV SDM has two fundamental objectives: to educate and to advance knowledge. Scholarly achievements of a faculty member in either or both of these areas determine the individual's academic rank and tenure status. Scholarly achievement refers to original or imaginative accomplishments in the conduct of one's academic responsibilities in teaching, research, or service.

In addition to teaching and research, the faculties of UNLV SDM provide services to patients and to the community. The clinical faculty members generally assume service responsibilities that are often not shared by colleagues in the basic sciences. The competence and scholarly manner with which faculty members discharge these responsibilities should be recognized, because the example of clinical competence is a major aspect of teaching ability.

Because it may be difficult for a given faculty member to attain excellence in research, teaching and service when departmental assignments exclude time for one or more of these activities, determination of rank should be based on the department chair's specific assignments.

Faculty appointed **on the tenure track** must present documented excellence in **at least two of three** fundamental academic activities (teaching, research, or service) as the major consideration for promotion. Faculty appointed to **non-tenure track** (Faculty in Residence) positions are expected to demonstrate excellence in **at least one of the three** areas of academic activity and will be evaluated for advancement in rank based on performance in their specialized area of expertise.

1.3.3 **Criteria for Faculty Appointment with regard to Rank:** The following is a set of descriptions that define differences between academic ranks. Eligibility for promotion is evaluated by reference to essential requirements and other specified desirable accomplishments. According to the UCCSN CODE, Section 5.11.1, Academic Rank is defined as Rank I, II, III, and IV and stipulates that Academic Units further provide appropriate policies and procedures. UNLV SDM defines each rank as follows and evaluates candidates for promotion by the specified criteria:

**Rank I: Instructor.** The rank of instructor is used for an appointment where the individual does not possess a terminal degree in the discipline or special field in which appointed. It is intended and expected that a person holding an appointment of instructor will complete the requirements for the terminal degree and be promoted to assistant professor within a six-year time period designated as a probationary period. If the terminal degree has not been obtained by this time, the individual will not be considered for tenure. During the period of probationary appointment to this rank, the scholarly competence, teaching performance and professional promise of the faculty member will be evaluated. Appointments to this title cannot be terminated without due notification of non-renewal.

**Rank II: Assistant Professor:** The rank of Assistant Professor is used for an appointment where the individual possesses the appropriate terminal degree in the discipline or special field in which appointed. A Person holding an appointment of assistant Professor has demonstrated effectiveness as a teacher or promise of becoming an effective teacher. The individual will provide evidence of satisfactory involvement in research and/or comparable creative activity, or provide evidence of staff responsibility for a service or a specific area of patient care and clinical teaching for which peer recognition can be documented.

*Criteria for Evaluation:*

1. Effective as a teacher, evidenced by mastery of both content and method.
2. Board Certification of its equivalent, if pertinent.
3. Presents research and scholarly findings at professional meetings.
4. Demonstrates initiative and sustained interest in research activity.
5. Assumes staff responsibility for service of a specific area of patient care and for clinical teaching.

**Rank III: Associate Professor:** The rank of Associate Professor is used for an appointment where the individual possesses the appropriate terminal degree in the discipline or special field in which appointed. A person holding an appointment of Assistant Professor has demonstrated effectiveness a University teacher or promise of becoming an effective University teacher. The individual will provide evidence of satisfactory productivity and due recognition in research and/or comparable creative activity, or provide evidence of leadership in and responsibility for a service of a specific area of patient care and clinical teaching for which peer recognition can be documented.

*Criteria for Evaluation:*

General Guidelines:

1. Minimum of 3 years in rank of Assistant Professor or equivalent.
2. Academic credentials congruent with expectations of UNLV SDM.
3. Developing reputation reflected by peer recognition within UNLV SDM.
4. Significant scholarly accomplishments in at least one of the three academic activities: teaching, research, and service.

Teaching Guidelines:

1. Effective as a teacher, evidenced by mastery and documented by student and faculty evaluations.
2. Responsible for design, organization, coordination, and evaluation of a course or series of lectures.
3. Recognized as an exemplary scientist or clinician whose teaching activities can be documented as providing an outstanding role model for students.
4. Participates in student guidance and counseling.
5. Responsible for development of continuing education or other professional programs, or is an invited speaker.

Research Guidelines:

1. Demonstrates initiative, independence, and sustained activity in research.
2. Publishes research findings and scholarly papers in refereed



journals.

3. Presents research and scholarly findings at professional meetings.
4. Obtains grants or other monies for research or other scholarly activities.
5. Serves on thesis or dissertation committees or research review boards.

Service Guidelines:

1. Provides staff responsibility for a service or specific area of patient care or clinical teaching for which peer recognition can be documented.
2. Serves on committees within the department, school, and/or UNLV.
3. Provides consultation to other departments or schools at UNLV and to local, State, regional or national organizations or institutions that seek or benefit from this expertise.
4. Serves on extramural grant review committees or editorial boards of scientific or professional journals.
5. Performs a key administrative role in patient care, research or teaching activities within UNLV SDM.
6. Provides service as a health educator for the Las Vegas community.

**Rank IV: Professor:** The rank of Professor is used for an appointment where the individual possesses the appropriate terminal degree in the discipline or special field in which appointed. A person holding an appointment of Professor has demonstrated effectiveness and excellence as a University teacher. The individual will provide evidence of a major contribution to their discipline and due recognition in research and/or comparable creative activity, or provide evidence of national recognition of successful leadership for a service in a specific area of patient care and clinical teaching for which peer recognition can be documented.

*Criteria for evaluation:*

General Guidelines:

1. Distinguished performance and maturity as an Associate Professor.
2. Academic credentials congruent with the expectations of the school.
3. An established reputation derived from substantive extramural peer recognition.
4. Sustained scholarly activity or significant accomplishments in at least one of the three academic activities: teaching research, and service.
5. Board certification or its equivalent, if pertinent.

Teaching Guidelines:

1. Sustained and outstanding teaching performance.
2. Leadership through design, organization, coordination, and evaluation of a course or courses; administrative responsibility at the school level of curriculum; supervision of staff teaching within a course or the school.
3. Invitation as visiting professor at other institutions.
4. Responsibility for student guidance and counseling regarding program planning and general curricular activities.

5. Sustained recognition as an exemplary scientist, teacher, or clinician whose activities can be documented as providing an outstanding role model for students.
6. Publication of educational works in relevant journals.

Research Guidelines:

1. Is senior author of papers published in refereed professional journals or other media (books, paper, etc.)
2. Receives grants or other monies as a principal investigator for research.
3. Invitations to participate at national or international professional or scientific meetings.
4. Invitations to preside over sessions at national or international professional or scientific meetings.
5. Recognition for excellence in research by professional or scientific institutions or organizations.
6. Serves as chair of thesis or dissertation committees.

Service Guidelines:

1. Appointment to responsible positions within the SDM or UNLV decision making bodies.
2. Recognition as an authority by other dental schools and by local, state, regional, or national organizations or institutions.
3. Senior staff responsibility for a service or specific area of patient care or clinical teaching.
4. Consultant to or serves on government review committees, study sections, or other national review panels.
5. Serves as an officer or committee chair in professional or scientific organizations or on editorial boards of professional or scientific journals.
6. Election to responsible positions on civic boards or organizations concerned with health care issues at the local, State, regional, national, or international levels.

<b>OHSU</b>	Research and publication
<b>ROSE</b>	Basic research, published clinic cases, educational research, online publication like Med-Ed Portal, presentations locally, nationally and internationally. Production of teaching methods, instruments, etc. that are at least recognized by peers at other institutions. The interpretation is rather broad and far reaching.
<b>UOP</b>	Publishing/Research/Presenting/reviewing of submissions
<b>UCLA</b>	Peer-reviewed publications
<b>UCSF</b>	Includes contributions to the literature in the form of manuscripts, chapters, books. Participation in invited lectureships and development of new methods and tools.
<b>USC</b>	Publication of clinical or laboratory research in peer reviewed journals.

CDM Philosophy on scholarship: commitment to an academic career and evidence of independent achievement and scholarship. Scholarship usually produces tangible results, but due to varied backgrounds, training and interests of faculty engaged in dental education, the results of scholarship may take a variety of forms:

(Adapted from Earnest L. Boyer's Scholarship reconsidered: Priorities for the Professorate)

1. Scholarship of Teaching - Teachers evidence scholarship when they fulfill the obligation of continued education in their own field, and stimulate active learning and a spirit of inquiry among the students. Some signs that teachers stimulate student inquiry include but are not limited to, sponsorship of table clinics, supervision of student research projects, service on research supervisory committees, training of post-doctoral fellows, interns and residents, and mentoring and advising students. The presentation of up-to-date and innovative teaching materials including, but not limited to, new clinical techniques, new courses, new lectures, new monographs and audiovisual materials, and new instructional design may also evidence teaching scholarship. Such scholarship may result in presentations at professional meetings, textbooks, or contributions to teaching consortiums. Additional avenues for this scholarship may include participation in interdisciplinary teaching efforts as well as cooperation with the public school systems by supervising high school student projects and tutorials.
2. Scholarship of Discovery - The discovery-oriented scholar may be involved in either basic or clinical research, or both, and will report original research findings or research techniques at professional meetings, invited presentations, and in peer reviewed journal articles or books. Discovery scholars often receive external funding, which may be another indication of appreciation and/or recognition of their scholarly activity.
3. Scholarship of Integration - The integrative scholar may synthesize information and publish journal articles, reviews and books. Alternatively, he/she may organize and participate in interdisciplinary research teams, conferences, workshops and symposia. Integration may occur among basic sciences, clinical sciences, or between basic and clinical sciences.
4. Scholarship Application - Application-oriented scholars may adapt new research findings to clinical treatment and patient care and publish their work in professional journals and books, or they may report new clinical and scientific findings to professional audiences via continuing education courses, table clinics and professional seminars. Alternatively, application-oriented scholars may focus on rendering new research and clinical knowledge accessible to lay audiences via public media such as magazines, newspapers, radio, TV, and museum displays. Some application-oriented scholars cooperate with the legal systems by participating in forensic endeavors or serving as expert witnesses in court cases.

5. Rewards, Recognition and Service - Scholarship usually receives peer recognition, (although not necessarily immediately). Some forms of peer recognition include citations in the professional literature, favorable book reviews, speaking invitations, sabbatical invitations, grants for research, conferences, travel or sabbatical leave, commercial contracts, patents, professional prizes, and awards. Each type of scholar may also engage in scholarly service. Thus, many discovery -, integrative -, or application-oriented scholars serve on the National Institutes of Health (NIH), National Science Foundation (NSF), and other professional review panels, review books, referee journal articles and grants, and edit journals and newsletters. Teaching scholars may contribute to the national board examinations and work with the Teaching Sections of the American Dental Education Association (ADEA). Scholars of all forms may hold professional offices.

**UWA** Participation in course design and teaching.  
Participation in research  
Publications

B. What are the expected standards for Assistant, Associate, and Full Professors?

**UAB** Assistant (DDS and clinical experience;  
Associate (DDS and Masters/PhD);  
Full (same as Associate)

**ATSU** Assistant professor requires a doctoral-level or a professional degree to be promoted to this level; requires a minimum of two years teaching experience. Associate professor has four or more years of experience as an Assistant professor. Professor has a doctoral degree and five years minimum as Associated professor.

**MUC** **APPOINTMENT TO RANK AND TRACK**

**I. Tenure and Non-Tenure Tracks**

- A. **Tenure Track:** those faculty members who are engaged meaningfully in the three areas of traditional academic activity (teaching and communication of knowledge, scholarly activity, and institutional/extramural professional service). Tenure track faculty may hold the rank of assistant professor, associate professor or professor. Tenure track faculty will have either a probationary or continuous contract with MWU. Probationary contracts: Probationary contracts at MWU are given to tenure track faculty members before they have achieved tenure. The initial period of appointment is usually for two years. Please refer to page 24, section IA for minimum time requirements. Probationary contracts enable a tenure track faculty member to apply for tenure review upon successful completion of the probationary period as modified by a contractual agreement at the time of appointment. A probationary contract is renewable if the criteria stipulated for renewability are achieved. Non-reappointment, termination, dismissal, or suspension of a probationary faculty member can occur only in accordance with the provisions outlined in this HANDBOOK.

Continuous contracts: continuous contract rights (tenure) at MWU are given to faculty members who have attained tenured status. Faculty members employed under continuous contract are entitled to an annual contract renewal subject to the terms and conditions of employment that exist at the time of each annual renewal by MWU. Continuous contracts are normally terminated upon resignation or retirement of the faculty member.

- B. **Non-tenure Track:** a faculty member who is engaged full time in one or two of the three major categories of academic activity (teaching and communication of knowledge, scholarly activity, and institutional/extramural professional service) or who is a faculty member at the beginning of his/her academic career (i.e., instructor or lecturer). Non-tenure track faculty may hold the rank of lecturer, instructor, assistant professor, associate professor or professor. Non-tenure track faculty are eligible for promotion in academic rank and receive the same fringe benefits as tenure track faculty. Non-tenure track faculty will have term contracts with MWU.

Term contracts: term contracts at MWU are given to non-tenure track faculty and part time faculty. Term contracts are limited to the period of employment agreed to in the contract. Term contracts do not confer upon a faculty member any entitlement to continued employment after the term specified in the letter of appointment expires.

C. **Change Between Tenure Track and Non-Tenure Track**

A faculty member who begins in a tenure track appointment may request a transfer to non-tenure track status. Similarly, a non-tenure track faculty member may request a transfer to a tenure track appointment if the faculty member has the appropriate qualifications for the tenure track position.

Transfer between tracks requires the approval of the appropriate chairperson/director, the dean of the college and the college Committee on Rank and Tenure. The probationary period for tenure consideration starts when the tenure track is initiated, unless stipulated otherwise in the contract.

## **ACADEMIC PROMOTION AND TENURE**

### **I. Eligibility for Promotion in Rank**

To be considered a candidate for promotion to a higher academic rank, a faculty member should normally meet the minimum eligibility criteria set forth below.

- A. **Minimum Time Requirements:** a faculty member will be expected to serve at least:

1. one year at the rank of lecturer before advancement to the rank of instructor;
2. two years at the rank of instructor before advancement to the rank of assistant professor;
3. four years as assistant professor before advancement to the rank of associate professor;
4. five years as associate professor before advancement to the rank of professor.

- B. **Academic Rank Qualifications:** faculty members seeking promotion must meet the qualification standards for the rank sought, corresponding to requirements delineated in this UNIVERSITY FACULTY HANDBOOK.

## **II. Eligibility for Tenure**

MWU recognizes the value of tenure as promoting not only academic freedom but also stability of a group of teachers and scholars dedicated to these ideals. In addition to the individuals accomplishments in all three aspects of academic activity (teaching and communication of knowledge, scholarly activity and institutional/extramural professional service), collegiality of the faculty member with other faculty members in the department/program and the faculty at large is an essential aspect of tenure. Consideration and action concerning tenure is separate from consideration for promotion. Tenure may be granted on appointment to a full, tenure track faculty member who has been tenured or has held equivalent faculty status at another college or university. The minimum time required for tenure may also be reduced based on the faculty member's previous faculty status. In such instances, the probationary period shall be stipulated in the initial appointment contract. Ordinarily, however, a faculty member is eligible for tenure consideration after a probationary period in a tenure track position at MWU. The probationary period begins with a faculty appointment in the tenure track at the rank of assistant professor or above. By special arrangement, the probationary period may be deemed to include full-time or *pro rata* service at other regionally accredited colleges and universities. Completion of this probationary period is not a guarantee of tenure. Although the faculty member may apply for tenure before the sixth year, the probationary period shall ordinarily not exceed six full-time academic years of service. If the candidate has not received tenure by the expiration of the six year probationary period, further reappointment to the faculty will be on an annual, non-tenure track basis. A leave with pay for less than an academic year will count toward promotion and/or tenure. A leave without pay for one academic year or more will not count toward promotion or tenure unless the faculty member and MWU agree in writing to the contrary at the time the leave is granted. A leave without pay for less than one year may or may not count toward promotion and/or tenure as agreed upon by the faculty member and MWU prior to the leave.

## **III. Application Procedure for Promotion in Rank and/or Tenure**

Application for promotion in rank and tenure may occur simultaneously or independently. The application procedure is identical for promotion and tenure. Additional procedures, guidelines and/or documentation are college specific, and reference may be made to each college subsection of this HANDBOOK. Each college has a separate Committee on Rank and Tenure who will provide further direction to the candidate regarding preparation of the required dossier in keeping with its college subsection. The dean's office of each college will notify all faculty members on an annual basis on or before December 1st about the deadline for seeking promotion in academic rank during the current academic year. It is the responsibility of each faculty member to check the UNIVERSITY FACULTY HANDBOOK to determine individual eligibility for promotion and tenure. The formal process of promotion in rank may be initiated by the faculty member seeking promotion or by the department chairperson/program director.

Since tenure is a matter for separate consideration apart from promotion in rank, faculty members seeking both promotion in academic rank and tenure must formally request consideration of each. A promotion in rank and/or tenure application flow chart is included in Appendix III.

Each faculty member seeking a promotion in academic rank and/or tenure assumes the responsibility for preparing a dossier summarizing and documenting his/her professional credentials, academic accomplishments, and activities. At a minimum, the faculty member's dossier shall include documentation of activities in the areas of teaching, scholarly activity and service sufficient to support the request for promotion. The dossier submitted to the college Committee on Rank and Tenure for promotion/tenure consideration should contain the following information and documentation.

- A. A letter requesting promotion and/or tenure, including the academic rank and a brief synopsis of the candidate's credentials documenting that the candidate either meets the minimum time requirements set forth in the UNIVERSITY FACULTY HANDBOOK, or, if not, justification that would support accelerated promotion and/or tenure consideration.
- B. The faculty member's *curriculum vitae*, which includes:
  - 1. summary and chronology of the faculty member's education and postgraduate training background;
  - 2. history of current and previous academic/professional appointment(s), promotion, history, and academic rank(s) held;
  - 3. state licensure information, and board certification (eligibility/passed), additional degrees attained if applicable;
  - 4. professional society memberships;
  - 5. professional honors and awards, if any;
  - 6. summary of current and past extramural grant support;
  - 7. consulting and service activities, i.e., external and internal committee appointments;
  - 8. professional and public service activities, i.e., a list of professional journals for which the faculty member has served as a manuscript reviewer, participant/organizer of professional conferences, continuing education program(s);
  - 9. seminars and other professional presentations;
  - 10. synopsis of teaching experience, educational program responsibilities, both at MWU and elsewhere;
  - 11. summary of scholarly activities and specific project/program responsibilities since the last promotion, i.e., clinical drug trials, human/experimental animal projects, etc.;
  - 12. scholarly publications, i.e., journal articles, book chapters, books, published abstracts;
  - 13. summary of other scholarly activities, i.e., case reports, inventions, patents, authorship of computer software programs, role in development of innovative educational programs and curricula, etc.
- C. Narrative summarizing the candidate's teaching, research, service activities since either appointment to the MWU faculty or the previous promotion.
- D. Copies or summaries of the candidate's faculty development plans for the period since either appointment to the faculty or the previous promotion.
- E. Copies or summaries of the candidate's annual performance evaluation.
- F. Summary of student evaluations of the candidate's teaching/instructional performance since either appointment to the faculty or the previous promotion.
- G. Course/instructional syllabi that are representative of the teaching responsibilities and the instructional techniques and evaluation methods

used by the faculty member in the delivery of his/her portion of the educational program.

- H. Reprints of published works that in the candidate's judgment typifies his/her level (quality) of scholarly activity.
- I. Current confidential letters of reference including a minimum of two from full faculty members, other than the chairperson/director, from the individual's department/program, one from other tenured MWU faculty members, and one from an academician outside of MWU who can address the issues relating to the recognition and professional reputation of the candidate on a local, regional and/or national level. If the department has sections, one letter must be from the section head. Letters of reference should be submitted to the department chairperson/program director. In the situation that two full faculty do not exist in a given department/program, then the letters must be from full faculty within MWU or outside the University. All letters of reference must be from faculty at or above the rank requested.
- J. Chairperson/director's letter that addresses all pertinent aspects of the promotion and/or tenure matter, particularly the qualifications of the candidate in relation to the requirements for the academic rank sought, and the desirability of the candidate as a permanent colleague if tenure is granted. The completed dossier without confidential letters is to be submitted by the candidate to his/her academic supervisor by February 1st with a covering letter formally requesting promotion that specifies the academic rank sought and consideration for tenure, if applicable. The confidential letters of recommendation must be forwarded under separate cover to the academic supervisor for inclusion in the dossier before the dossier of the candidate shall be considered complete. The candidate's application can be withdrawn from the promotion/tenure review process until March 15th. The candidate must submit written notification of this withdrawal to the Dean and academic supervisor. Department chairpersons/program directors who are applying for promotion and/or tenure should submit their dossier and have letters of recommendation sent directly to the dean of the college by February 1st. The college dean shall select at least two MWU department chairpersons/program directors and possibly an external peer reviewer to evaluate the candidate chairperson/director's dossier. Their report will be forwarded to the dean of the college for inclusion in the chairperson/director candidate's dossier. Specific departmental guidelines for advancement in rank and/or tenure should be forwarded to the reviewers.

#### **IV. Responsibilities of the Academic Supervisor for Faculty Promotion and Tenure Assessment**

The academic supervisor will review the dossier in light of the recommended guidelines for promotion and/or tenure outlined in the Midwestern Faculty Handbook and the subsection related to rank and tenure in the handbook of the specific college. If the candidate's record of academic accomplishment outlined in the dossier meets the qualifications, the academic supervisor will write a letter in support of the promotion and/or tenure. This letter and the dossier are then submitted to the Dean of the college by February 15th. The dossier is to remain in the office of the Dean until April 4th when the dossier is transferred to the University President. If the academic supervisor



determines that the candidate is ineligible for promotion and/or tenure or that documentation is insufficient, the academic supervisor must notify the candidate of the specific deficiencies by February 8th. Notification of the candidate requires a signed return receipt. A copy of all correspondence on this matter shall be forwarded to the college Dean. If the Dean of the college determines that the dossier should not be reviewed by the Committee on Rank and Tenure because the documentation is insufficient and/or the candidate is ineligible for promotion, the candidate must be notified of this decision by Feb 27th. This notification requires a signed return receipt. The dossier and related documents will be available for review by the college Committee on Rank and Tenure March 1st of the year in which promotion is sought.

#### **V. Responsibilities of the College Committee on Rank and Tenure**

It is the responsibility of the college Committee on Rank and Tenure to review critically the documentation supporting those activities listed in the evaluation, promotion, and tenure sections of the Midwestern Faculty Handbook and the subsection related to rank and tenure in the handbook of the specific college to determine whether the candidate meets the qualifications specified for the rank and/or tenure. The college Committee on Rank and Tenure may ask the candidate and/or academic supervisor to provide any additional documentation that the committee deems necessary for its full deliberation. Failure by the candidate and/or academic supervisor to provide such documentation by the specified dates may delay consideration of such promotion to the next academic year. The Committee on Rank and Tenure must forward their recommendation on promotion and/or tenure to the Dean and to the University Faculty Senate by April 1st. The Committee must also notify the candidate of the positive or negative recommendation by April 1st. If the Committee on Rank and Tenure does not recommend the promotion and/or tenure, the April 1st notification to the candidate requires a signed return receipt, with copies to the Faculty Senate, the Dean of the college and the academic supervisor. At the conclusion of each fiscal year's promotion/tenure considerations, the chairperson of each college Committee on Rank and Tenure will be responsible for submitting an annual report to the University Faculty Senate summarizing the deliberations and actions of the Committee.

#### **VI. Responsibilities of Academic Administration**

The review of faculty members for promotion in rank and/or tenure is the responsibility of the Dean of the college. The Dean is expected to evaluate the recommendations of the academic supervisor and the college Committee on Rank and Tenure with due consideration of the guidelines in the Midwestern Faculty Handbook and the subsection related to rank and tenure in the handbook of the specific college. The Dean forwards his/her recommendation for promotion and/or tenure to the President and the candidate by April 4th. If the Dean does not support advancement in rank and/or tenure, the April 4th notification to the candidate requires a signed return receipt. If there is a conflict between the recommendation of the Dean and the recommendation of the college Committee on Rank and Tenure, the President shall confer with the members of the Committee and the Dean of the candidate's college. The President must inform the candidate of his/her recommendation in writing by April 30th. This notification of the candidate requires a signed return receipt. The dossier, excluding the letters of recommendation, must be released to the candidate by June 30th of the year in which the dossier was submitted. The confidential letters of recommendation are to be forwarded in a confidential

and secured manner to Human Resources, where they are maintained permanently in the Faculty Files.

## **VII. Responsibilities of the University Faculty Senate**

The University Faculty Senate has two major responsibilities:

- A. The University Faculty Senate is responsible for reviewing the procedure used to arrive at the recommendation by the college Committee on Rank and Tenure to determine adherence to University standards and guidelines for promotion and/or tenure.
- B. If the Faculty Senate determines that the procedures adhere to University standards and guidelines for promotion and/or tenure, the Senate then forwards the recommendation of the college Committee on Rank and Tenure to the President by April 15th. If the Faculty Senate determines that the procedures do not adhere to University standards and guidelines for promotion and/or tenure, the Senate must inform the college Committee on Rank and Tenure and the candidate in writing by April 15th with copies to the Dean and the academic supervisor. This notification requires a signed return receipt. The Faculty Senate will remand the matter to the appropriate college Committee on Rank and Tenure for reconsideration with instructions to follow the standards and guidelines for promotion in rank and/or tenure. This action does not abrogate the faculty member's right to appeal.

## **VIII. Responsibility for Granting Promotion in Rank and/or Tenure**

The President receives recommendations for promotion in rank and/or tenure from the University Faculty Senate and dean. As stated in Article X of the corporate bylaws, promotion in rank and/or tenure is formally granted by the Board of Trustees upon the recommendation of the University Faculty Senate with the approval of the President. Advancements in rank and tenure decisions are not official until written notice is received from the President.

## **IX. Appeal of Decision for Promotion and/or Tenure**

- A. Decision of the Academic Supervisor: The candidate may appeal the decision of the academic supervisor that the candidate is ineligible and/or has insufficient documentation. This written appeal should provide documentation that provides reasonable justification for reconsideration of this appeal by directly forwarding his/her dossier to the Dean by February 15th.
- B. The decision of the Dean: The candidate may appeal the Dean's decision (not to Send the dossier to the College Rank and Tenure Committee) by directly forwarding his/her dossier to the College Rank and Tenure Committee by March 1st. In such an instance the dossier must be accompanied by a cover letter written by the candidate to the College Rank and Tenure Committee, explaining the basis of argument for the appeal of the dean's decision.
- C. The April 1st decision of the College Rank and Tenure Committee and/or the April 4<sup>th</sup> decision of the Dean: The candidate may appeal the April 1st decision of the College Rank and Tenure Committee and/or the April 4th decision of the Dean by April 9th. The basis of the appeal may be non-procedural issues or procedural error. A written appeal based on non-procedural issues is submitted to the President, with written return receipt requested. This appeal should provide documentation that provides reasonable justification for direct action by the President. A written appeal

based on procedure error by the College Rank and Tenure Committee and/or Dean) is submitted directly to the University Faculty Senate. The University Faculty Senate submits a report on procedural issues to the President by April 15th.

D. The decision of the President: The candidate may submit a written appeal of the President's decision to the University Faculty Appeal Committee by May 8th. The recommendation of the University Faculty Appeal Committee is forwarded to the Board of Trustees and the candidate by May 30th.

E. The decision of the Board of Trustees: The final decision in the appeals process is made by the Board of Trustees by June 15th. (The candidate is subsequently notified of the Board's decision by June 20th ; this notification requires a signed return receipt. )

## X. Reduced Tenure

A tenured faculty member may voluntarily reduce his/her tenure status with the University by reducing his/her time commitment to the institution. Such a reduction may not be lower than 50% of a full-time equivalent; otherwise tenure at MWU shall be automatically relinquished. A tenured faculty member wishing to reduce his/her time commitment to the institution must request approval by the department chairperson/program director and the dean 90 calendar days before the reduction of time is to take effect. In order to return to full status, the faculty member must also request approval by the department chairperson/program director and the dean 120 calendar days before the proposed return. These arrangements are made at the discretion of the department chairperson/program director with the approval of the dean who evaluates each case according to institutional needs. Tenure is granted on a *pro rata* basis in the case of those giving time between 50% and 100%. Time in reduced tenure situations shall also count on a *pro rata* basis toward the minimum time requirements for the promotion in academic rank.

UBC

The Professor Path: Criteria for Tenure and Promotion  
based on excerpts from the Agreement on Conditions of Appointment for Faculty

Criteria*	Appointment to Instructor II	Appointment or Promotion to Assistant Professor	Tenure	Appointment or Promotion to Associate Professor	Appointment or Promotion to Professor
Teaching	"judged principally on performance in...teaching" 4.01 (a); "evidence of ability in teaching"; "successful teacher, and is capable of providing instruction at the various levels in his or her discipline, but it is sufficient to show potential to meet these criteria" 3.05(a) EXCEPT that "requires...evidence of potential ability in teaching..." 3.03	"judged principally on performance in...teaching" 4.01 (a); "evidence of ability in teaching"; "successful teacher, and is capable of providing instruction at the various levels in his or her discipline, but it is sufficient to show potential to meet these criteria" 3.05(a)	"have maintained a high standard of performance in meeting the criteria [of teaching, scholarly activity and service] ... and show promise of continuing to do so" 4.01(a); "the decision to grant a tenured appointment shall take into account the interests of the Department and the University in maintaining academic strength and balance" 4.01(d)	"evidence of successful teaching... beyond that expected of an Assistant Professor" 3.06 (a); "teaching as defined in Article 4.02"; "ability to direct graduate students" 3.06(a)	"contributions (judged by the criteria set out in Article 4) are considered outstanding"; "appropriate standards of excellence"; "high quality in teaching" 3.07(a)(b)
Scholarly Activity	judged principally on performance in... scholarly activity 4.01 (a); "evidence of ability in... scholarly activity"; "involved in scholarly activity... but it is sufficient to show potential to meet these criteria" 3.05(a) EXCEPT that "requires the completion, or promise of early completion, of academic qualifications and evidence of potential ability in...research" 3.03	"judged principally on performance in... scholarly activity" 4.01 (a); "normally requires completion of academic qualifications, and evidence of ability in... scholarly activity"; "involved in scholarly activity... but it is sufficient to show potential to meet these criteria" 3.05(a)	"have maintained a high standard of performance in meeting the criteria [of teaching, scholarly activity and service] ... and show promise of continuing to do so" 4.01(a); "the decision to grant a tenured appointment shall take into account the interests of the Department and the University in maintaining academic strength and balance" 4.01(d)	"evidence of... scholarly activity beyond that expected of an Assistant Professor"; "sustained and productive scholarly activity" 3.06(a)	"contributions (judged by the criteria set out in Article 4) are considered outstanding"; "appropriate standards of excellence"; "have wide recognition in the field of their interest"; "sustained and productive scholarly activity, have attained distinction in their discipline" 3.07(a)(b)
Service to the University and the Community	"Service to the academic profession, to the University, and to the community will be taken into account...but...it cannot compensate for deficiencies in teaching and scholarly activity" 4.01 (a)	"Service to the academic profession, to the University, and to the community will be taken into account...but...it cannot compensate for deficiencies in teaching and scholarly activity" 4.01 (a)	"have maintained a high standard of performance in meeting the criteria [of teaching, scholarly activity and service] ... and show promise of continuing to do so" 4.01(a); "the decision to grant a tenured appointment shall take into account the interests of the Department and the University in maintaining academic strength and balance" 4.01(d)	"willingness to participate and participation in the affairs of the Department and the University"; "promotion to this rank is not automatic or based on years of service" 3.06(a)	"contributions (judged by the criteria set out in Article 4) are considered outstanding"; "appropriate standards of excellence"; "participated significantly in academic and professional affairs"; "promotion to this rank is not automatic or based on years of service" 3.07(a)(b)

<b>LLU</b>	<p>At Loma Linda University, faculty have the choice of three tracks: Academic Track, Clinical Track, and Research Track. Each track is subdivided into four levels: Instructor, Assistant Professor, Associate Professor, and Professor. There are promotion criteria for advancement from one level to the next based on scholarly activity, teaching and service (e.g. a combination of success, strength, and/or excellence in each area). Additionally, there is a requirement of maintaining a minimum FTE within each level prior to consideration for advancement.</p> <p>Scholarly activity is divided into three categories (A, B, and C). Examples of scholarly activities in Category A include being a principle investigator, a primary author of a research article or a textbook or chapter, editor of a scientific journal, or completion of an MS or PhD program. Examples of Category B include being a co-investigator, a co-author of a published paper, primary author of an abstract or case report, oral presentations at scientific meetings, obtaining a specialty certificate, etc. Examples of Category C include poster presentations, preparation of grant applications, co-author of abstracts, case reports, professional development, guest lecturing, presentations at school seminars and table clinics, etc.</p> <p>The Clinical Track recognizes development and accomplishment in clinical expertise and instruction. Scholarly activities and service are oriented toward developing excellence and advancing knowledge in the teaching role. For advancement to the Associate Professor level, a faculty member must show strengths in teaching, scholarly activities, and service. For advancement to the Professor level, a faculty member must show excellence in teaching, and excellence in either scholarly activity or service and strength in the other.</p> <p>Note: The previous descriptions are a brief synopsis of the complete criteria required for advancement.</p>
<b>UNLV</b>	Please see response to previous question.
<b>OHSU</b>	<p>Tenure is considered for Associate Professors and above after 5, 6 and 7 years. The two tracts for tenure are Clinical and Research. No faculty has been promoted to tenure on the Clinical Tract. Faculty on Clinical Tracts are on a one-year contract. Employment in the State of Oregon is “at will.” The Department Chairman does annual employee reviews. Student evaluations continue to factor as a significant part of the employee review.</p>
<b>ROSE</b>	<p>Yet to be defined by the specific school (CODM). From the standpoint of the university, traditional expectations in teaching, research, and service are expected. Local reputation, beginner - Assistant Professor. National reputation - Associate Professor; National and some International reputation - Professor. These are in general terms. Other considerations might include, years of experience, post-graduate degrees, etc. When defined by CODM, standards will most likely be similar.</p>
<b>UOP</b>	<p>Assistant: known locally; Associate: known regionally; Professor: known nationally</p>
<b>UCLA</b>	<p>Criteria for Advancement: Research and Creative work; Teaching; and Professional and University activities and service. IN general, the first two criteria carry greater weight. “Superior intellectual attainment, as evidenced both in teaching and in research or other creative achievement, is an indispensable qualification for appointment or promotion to tenure positions.”</p>

**Assistant Professor:** In order to be appointed or promoted to the rank of Assistant Professor, you must show promise of achieving stature in your field as well as fulfillment of the criteria applicable to your series. During your appointment to Assistant Professor, you are expected to develop into an excellent teacher and/or clinician, and to develop a clear research focus, depending on the criteria for your series. University and public service should be minimal at the Assistant level. You should work closely with your mentor(s) and Department Chair to be certain that you are making appropriate progress and that your allocation of time to different activities (research, clinical, teaching) is balanced effectively.

**Associate Professor:** In order to be appointed or promoted to the rank of Associate Professor, you must exhibit evidence of excellence in all applicable criteria in your series. **Remember that only in the Ladder Rank Professor series do you obtain tenure at this rank.** In most other series, continued professional growth and excellence in teaching are required. If research is a criterion, you must attain national recognition for independent contributions to research or creative activities. Independence in research includes publications as first author in peer-reviewed journals, independent extramural research funding, and principal investigator status. In the clinical arena, significant contributions in the areas of creative and scholarly activity must be made. Creative activity might include the development of innovative clinical programs or new approaches to disease management. Scholarly activity might include contributions to the literature in the form of papers, chapters, and books that either track or bring new insights to the understanding of disease and its therapy. At the Associate level, significant service to your profession must be made. There should be involvement and leadership in professional organizations and societies. You should serve on departmental, school and University committees. The criteria for appointment or promotion to Associate Professor are series dependent and department defined. You should meet with your Department Chair to discuss the criteria that will be applied to your appointment or advancement.

**Professor:** Appointment or promotion to Professor requires continued professional growth and excellence in teaching. For promotion to fill Professor rank you should demonstrate national and international prominence related to research or creative activities. Your creative activities should reflect the same or greater accomplishments met at the Associate level. As Professor, your University and public service, including service to your profession, should be significant and regular. Examples of the level of service required at the Professor level include participation in school and campus-wide committees, University-wide committees, professional society committees or offices, and service as a reviewer for national grant funding agencies.

## **Promotion Policy for Non-Tenure Track Faculty**

Achievements by non-tenure track (NTT) faculty members are recognized by increase in rank. Consideration of such an increase is based on guidelines established for consideration of tenure track promotions.

### **Clinical Scholar Designation**

#### **Background & Rationale:**

University schools of medicine and dentistry employ a significant number of non-tenure track clinical faculty to ensure optimal mentored student doctor learning and training in clinics and hospitals. These invaluable clinical faculties are essential for clinic teaching and student doctor supervision as well as patient care. In recent years, additional opportunities for non-tenure track clinical faculty have become more prevalent associated with clinical research --- patient-directed research activities. With this new emphasis in many academic health science centers throughout the nation, increasingly “clinical scholar” designations have been introduced to discriminate within the non-tenure track clinical faculty. The School of Dentistry at the University of Southern California proposed non-tenure track clinical scholar is modeled after that recently introduced and approved for the Keck School of Medicine (2000). This non-tenure track clinical faculty designation was originally introduced in 1985 at the School of Medicine at the University of Chicago. Today, it is well recognized at many academic research-intensive medical and dental schools in the nation.

**Purpose:** The purpose of the Clinical Scholar designation is to provide a basis for recognizing the scholarly accomplishments of clinical professors at the School of Dentistry. The designation is intended for those clinical faculty who have academic profiles which do not permit sufficient effort to be devoted to research to allow them to meet the standards for the award of tenure at the University of Southern California. The School of Dentistry “clinical scholar” designation should be available to those dental school faculty on the non-tenure track who have gained scholarly distinction in their field without fitting into the traditional profile of a tenure track faculty member. The designation will be based on a rigorous evaluation process to ensure a validation of esteem.

Faculty affiliated with Dentistry shall have the title of "**Professor of Dentistry (Clinical Scholar)**" or while faculty affiliated with Biokinesiology and Physical Therapy and/or Occupational Therapy and Occupational Sciences shall have the title of "**Professor of Biokinesiology and Physical Therapy (Clinical Scholar)**", "**Professor of Occupational Therapy and Occupational Sciences**" or "**Associate Professor of Biokinesiology and Physical Therapy (Clinical Scholar)**," "**Associate Professor of Occupational Therapy and Occupational Sciences (Clinical Scholar)**" and shall be appointed on the non-tenure track in accordance with USC Faculty Handbook policies.

The President of the University will award the designation and such faculty members should, when appropriate and feasible, have extended contracts of three to five years.

**Requirements:** Faculty members who are appointed with or promoted to the Clinical Scholar title will be those who are scholars in the application of science to clinical care. These faculty will be expected to have a strong focus in scholarly activities and education along with their clinical responsibilities. The Clinical Scholar designation will require high standards of accomplishment and rigorous review by the same faculty bodies and administrative officers who now review tenure track appointments and promotions. Time in rank to achieve the Clinical Scholar designation will be identical to that in effect at the University for the tenure-track. Review and promotion decisions will be mandatory in year 6 for an Assistant Professor. Years in rank as an Assistant Professor at another institution will be counted up to a maximum of three (3) years. Faculty joining USC at the Associate or full Professor rank will have the same number of years for review and award of the Clinical Scholar designation that faculty on the tenure track have in order to achieve the award of tenure. Faculty who receive the Clinical Scholar designation will be expected to participate actively in the affairs of their Divisions and the University and to provide special leadership in clinical affairs. As per the *USCSD Sabbatical Leave Application Procedures*, all Clinical Scholar faculty will be eligible to apply for a Sabbatical Leave at the end of year 6. Division Chairs will be encouraged to issue three to five year contracts whenever appropriate and feasible. Three to five-year contracts will be renewable based on merit and performance.

**Faculty Title:** Faculty members who receive the Clinical Scholar designation will be permitted to use the titles “Professor of Dentistry (Clinical Scholar), Associate Professor of Dentistry (Clinical Scholar), Professor of Biokinesiology and Physical Therapy (Clinical Scholar), Associate Professor of Biokinesiology and Physical Therapy (Clinical Scholar), Professor of Occupational Therapy and Occupational Sciences (Clinical Scholar) or Associate Professor of Occupational Therapy and Occupational Sciences (Clinical Scholar).” University records will record them as being on the non-tenure track, with the clinical scholar designation.

**Implementation:** Following approval by appropriate committees at the School of Dentistry and by the Provost of the University, the Clinical Scholar designation will be implemented, and the Office of Faculty Affairs at the School of Dentistry will accept appointments and promotions with the designation. It is expected that some current non-tenure track faculty with a clinical designation may wish to be considered for designation as Clinical Scholar. Faculty members who wish to do so may apply to their Division Chairs and the Faculty Development Committee (FDC) will make an evaluation to determine whether the faculty member qualifies for consideration of this designation based on the faculty member’s accomplishments and activity profile. Such changes will be allowed for a period of 3 years to accommodate the time required in compiling dossiers, review by the FDC, review by the University Committee on Appointments, Promotions and Tenure and review by the Provost. Their Division Chairs may identify Assistant Professors appointed in the future on the non-tenure track as candidates for the Clinical Scholar designation at the time of appointment or at any other time through year 3. For all such candidates, a year 3 review will be conducted to determine whether the faculty member is progressing satisfactorily toward Clinical Scholar designation at the end of year 6. With the approval of the

Provost, candidates may be identified after year 3. Candidates for Clinical Scholar on the non-tenure track remain subject to annual appointment or non-reappointment as non-tenure track faculty. The Clinical Scholar designation is not a replacement for the tenure track. Faculty in clinical departments who are at the frontiers of science will continue to be appointed on the tenure track and recognized for their accomplishments through the award of tenure. Faculty on the tenure track who are not granted tenure have no entitlement to be designated Clinical Scholar, but may be notified of non-reappointment pursuant to the notice provisions of the Faculty Handbook covering probationary faculty.

**Other Full-time (NTT) Faculty Promotions:** A recommendation for promotion for (NTT) full-time research or (NTT) full-time clinical faculty originates with the appropriate division chair or program director. This recommendation will be accompanied with a dossier documenting and evaluating the candidate's accomplishments in his/her facet of specialization. The dossier shall contain: 1) a two-three page personal statement outlining the candidate's academic contributions, goals and future plans; 2) a Curriculum Vitae; 3) letters solicited from leaders in research disciplines or dental education (3-5 external letters, 3-5 internal letters)—the candidate submits some names to the Chair, but the preponderance of referees solicited should be the choice of the Chair; 4) 3-5 letters from current or former students and other documentation of teaching excellence, e.g. teaching evaluations (required for Clinical Non-tenure Track faculty, depending on individual profiles for Research Non-tenure Track faculty); and 5) Summaries of the year-end performance evaluations.

**Full-time Non-tenure Track Research Faculty**

*Titles: Research Assistant Professor, Research Associate Professor, Research Professor, (USC Faculty Handbook, Section 3-1(C), p. 9)*

To qualify for promotion to (NTT) Research Associate Professor or (NTT) Research Professor, it is expected that a candidate will have a substantial publication record and will have become involved in national research societies. Promotion is subject to approval, in sequence, by the Division Committee, Division Chair, Faculty Development Committee and the Dean. The expectations for promotion to (NTT) Research Associate Professor or (NTT) Research

Professor include:

- at least six years at the previous rank (promotion following a shorter time in rank is possible for outstanding performance)
- publications of research findings in journals with selective editors and rigorous review
- procedures
- quality and quantity of publications sufficient to convince review committees of a national
- reputation for outstanding contributions in research
- attainment of funding from agencies employing rigorous peer-review procedures
- involvement in national research organizations
- presentation of research findings at recognized academies and societies
- the dossier will contain year-end evaluations and reviews performed by the division chairs
- during the period of service since the last promotion/appointment
- the basis for faculty promotion is meritorious participation in one or more of the following areas: scholarship, teaching, service. Faculty must excel in at least one of these fields.



### **Full-time Non-tenure Track Clinical Faculty**

*Titles: Assistant Professor of Clinical Dentistry, Associate Professor of Clinical Dentistry, Professor of Clinical Dentistry, (USC Faculty Handbook, Section 3-1(C), p. 9)*

To qualify for promotion to (NTT) Associate Professor of Clinical Dentistry or (NTT) Professor of Clinical Dentistry, it is expected that the candidates will have become recognized by their students and peers as being an outstanding clinical teacher. It is also expected that some involvement in local and national professional organizations will be evident. Promotion is subject to approval, in sequence, by the Division Committee, Division Chair, Faculty Development Committee and the Dean. The expectation for promotion to (NTT) Associate Professor of Clinical Dentistry or (NTT) Professor of Clinical Dentistry include (but are not limited to):

- at least six years of service at the previous rank (promotion following a shorter time in rank is possible for outstanding performance)
- recognition by students and peers as being outstanding in one or more fields of teaching, service, or scholarship
- contributions to the development of educational experiences and materials (e.g. may include computer programs/activities, clinical evaluation forms, written instructional guides, chapters, books or other publications to facilitate learning)
- success in achieving grant, foundation, governmental support for scholarship or service
- involvement in local and national professional and educational organizations (e.g. American Dental Education Association, ADEA)
- scholarly presentations before colleagues in disciplines of common interest
- the dossier will contain year-end evaluations and reviews performed by the division chairs during the period of service since the last promotion/appointment.
- the basis for faculty promotion is meritorious participation in one or more of the following areas: scholarship, teaching, service. Faculty must excel in at least one of these fields.

### **Part-time Clinical Non-tenure Track Faculty**

*Titles: Clinical Instructor, Clinical Assistant Professor, Clinical Associate Professor, Clinical Professor, (USC Faculty Handbook, Section 3-1(C), p. 9)*

Part-time (NTT) faculty appointment time commitments will vary and expectations for promotion in the part-time ranks differ with the candidate's involvement in the School of Dentistry educational programs. Because it is anticipated that most, if not all, part-time faculty appointees concentrate their activities in teaching, it is expected that they will be outstanding teachers to qualify for promotion. In addition, it is expected that they will have held uninterrupted appointments for a specified number of years. Promotion is subject to approval, in sequence, by the Division Committee, Division Chair, Faculty Development Committee and the Dean.

Documentation for promotion to (NTT) Clinical Assistant, (NTT) Clinical Associate or (NTT) Clinical Professor requires a written recommendation and evaluation of teaching performance by the division chair. This recommendation will be accompanied with a dossier documenting and evaluating the candidate's accomplishments. The dossier shall contain 1) a two-three page personal

statement outlining the candidate's academic contributions, goals and future plans 2) a Curriculum Vitae 3) letters solicited from leaders in the dental education (2-4 external letters, 2-4 internal letters). The candidate submits some names to the Chair, but the preponderance of referees solicited should be the choice of the Chair. 4) 2-4 letters from current or former students and other documentation of teaching excellence, e.g. teaching evaluations. Evidence of involvement in professional dental organizations on a local/state/national level and year-end performance reviews may be added to supplement the dossier. The expectations for promotion to (NTT) Clinical Assistant Professor, (NTT) Clinical Associate Professor, or (NTT) Clinical Professor for those faculty at 50% time or less include: (Expectations for part-time NTT clinical faculty at more than 50% time shall be the same as that listed above for full-time NTT Clinical faculty.)

- at least eight years of service at the previous rank (promotion following a shorter time in rank is possible for outstanding performance)
- recognition by students and peers as being an outstanding teacher

Additionally, the following criteria may be considered:

- contributions to the development of educational experiences and materials (e.g. may include computer programs/activities, clinical evaluation forms, written instructional guides, chapters, books or other publications to facilitate learning)
- involvement in local and national professional and educational organizations (e.g. American Dental Education Association, ADEA)
- scholarly presentations before colleagues in disciplines of common interest
- the dossier will contain outstanding annual performance reviews performed by the division chairs during the period of service since the last promotion/appointment
- the basis for faculty promotion is meritorious participation in one or more of the following areas: scholarship, teaching, service. Faculty must excel in at least one of these fields.

## **PROCEDURES FOR NON-TENURE TRACK FACULTY APPOINTMENT, REAPPOINTMENT, NON-REAPPOINTMENT AND MID-CONTRACT TERMINATION**

### **I. Appointments**

Initial appointment to a visiting position may be made by the Dean on recommendation of the Division Chair for up to one year. Visiting appointments may be renewed only once. All non-visiting full-time appointment and promotions of non-tenure track faculty will be based upon documentation sufficient for evaluation of the suitability and qualification of the candidate. All categories of non-tenure track faculty described in the Faculty Handbook are available for use.

The Faculty Development Committee shall review designation of titles at the initial appointment. New appointees will generally be designated at starting ranks of (NTT) Research Assistant Professor, (NTT) Clinical Instructor or (NTT) Assistant Professor of Clinical Dentistry as appropriate to their specialization, but may receive higher levels designations on hire based on review by the FDC and the Dean.

Criteria for higher-level titles, conferred at the initial appointment, shall be based on criteria for promotion as described above without the requirement for time in

rank. The research title designates “an individual conducting research, principally on external funding,” who has little or no teaching responsibility (Faculty Handbook, sec. 3-1 {C}) for clinical faculty within the existing non-tenure track. A “clinical scholar” designation is available to be awarded to those faculty on the non-tenure track who have gained high recognition as clinical scholars in their fields without fitting into the traditional profile of tenure. The designation will be based on a rigorous evaluation process to ensure a validation of esteem. Such individuals will be called Associate Professor of Dentistry (Clinical Scholar) / Professor of Dentistry (Clinical Scholar) and will be appointed on the non-tenure track in accordance with existing Faculty Handbook policies and this policy. They should, when appropriate and feasible, have contracts of three years and five years duration for Associate and full rank, respectively. Assistant Professors can be identified as candidates for clinical scholar designation. Time in rank to achieve the clinical scholar designation will be identical to those in effect for the tenure track. The clinical scholar designation is awarded by the President of the University, or his or her designee, upon the basis of a full dossier including committee and administrative recommendations at the division, school, and University level.

## **II. Evaluation**

The general criteria for academic evaluation at the School of Dentistry are those stated in University policies including Faculty Handbook sec. 3-2 (C), “Faculty Responsibilities.” Additional evaluation criteria, for those with clinical duties, are excellence in patient care and observance of all compliance and credentialing policies. The specific criteria for assessing the contribution of the individual’s teaching, research, or both, to the academic mission of the University are excellence in performing the duties assigned to the individual. The relative weights given to the criteria, and the relevant evidence, are in accordance with the work profile, or other allocation of duties, as determined by the division chair or his or her delegate. Evaluations, reviews, and other relevant evidence may be taken into consideration in making personnel decisions.

## **III. Reappointment, Non-reappointment, and Mid-contract Termination**

### **A. Mid-contract Termination for Cause**

“The same due process available to tenured faculty members must also be provided in fact to non-tenured faculty in instances of prospective dismissal for cause before the expiration of a non-tenured faculty member’s contract,” as provided in the Faculty Handbook, sec. 3-7(D)(4). The procedures are set out in the Faculty Handbook, sec. 3-9, which applies “to the dismissal for cause of a non-tenure track faculty before the expiration of his/her contract. Dismissal for cause should not be confused with non-reappointment.” Faculty Handbook, sec. 3-9(A). Dismissal for cause is based on charges of “adequate cause” as defined in Faculty Handbook, sec. 3-6, paragraph 4; that term has the same meaning for tenured, tenure-track, and non-tenure track faculty.

### **B. Mid-contract Termination Not for Cause**

(1) Any non-tenure track faculty with patient care duties, who ceases to have a valid license to practice or otherwise fails to meet the obligations listed in the credentialing and compliance policies, may be terminated with minimum of 30 days’ notice or pay in lieu of notice.

(2) Any non-tenure track contract which is longer than one year may be terminated earlier than its stipulated end, with minimum of 90 days’ notice or pay in lieu of notice, if the Dean determines there is a bona fide need to do so based on either of the following:

(a) if the Dean determines there has been a cutback in external sources of funding for the specific activity supporting that individual in whole or part, such as (1) for individuals doing research work, cutbacks or ending of the grant or contract supporting that research, (2) for individuals doing clinical work, cutbacks or ending of the professional services agreements with extramural clinical sites.

(b) if the Dean determines, after consulting with the Faculty Development Committee, there has been substantial program change.

### **C. Reappointment and Non-reappointment**

#### **(1) Non-renewable and temporary contracts**

“The University has no obligation to renew a non-tenure track faculty appointment.” Faculty Handbook, sec. 3-7(D)(1). A fixed-term contract may be designated as non-renewable (for example, in the case of individuals holding fellowships.) Procedures for reappointment “do not apply to individuals on non-renewable contracts.” Faculty Handbook, sec. 3-7(D)(2). Unless otherwise provided in the contract, an initial one-year appointment, and any appointment for less than one year, is a temporary appointment. “In case of faculty members who are appointed only on a temporary basis (one year or less), the date on which the appointment ends

#### **WUHS**

**Assistant Professor** – For appointment to the rank of Assistant Professor, the faculty member should have earned the doctoral degree or equivalent in his or her discipline or profession and show promise in the areas of teaching, scholarship and service.

**Associate Professor** – For promotion or appointment to the rank of Associate Professor, the faculty member will be evaluated in the areas of teaching, scholarship and service. The faculty member must meet the criteria for, and/or hold the rank of Assistant Professor. In addition, the faculty member must document sustained records of accomplishment. The candidate must demonstrate excellence in teaching and advancement toward excellence in scholarship and service.

Promotion is based on merit and is earned by achievement as evidenced by the faculty member’s total contribution to the overall mission of the College and University. The primary requirement for attaining the senior rank of Associate Professor or Professor is the demonstration of substantive, creative and independent scholarship in academic endeavors (teaching, research and service). The discovery, transmission and application of new facts, insights and relationships and their integration into existing knowledge constitute evidence of scholarship (See above for definition of scholarship)

**Interim Review** – A 3-year interim review will be required for those faculty members who are eligible for promotion from Assistant Professor to Associate Professor and/or tenure. An interim review will not be conducted for faculty promotion from Associate Professor to Professor. The faculty member must provide an interim review dossier on the approved electronic interface and inform the Division Chair in writing by August 1st of the assigned year. The Division Chair will inform the FEPTC in writing to initiate the interim review. A dossier must be available for the FEPTC by August 31st of the assigned year.

The FEPTC will evaluate the dossier for completeness. If the dossier is deemed to be incomplete, the FEPTC may request the faculty candidate provide further documentation to complete the dossier. Internal and external letters of recommendation will not be required for this interim review. A faculty member who fails to submit a complete dossier to the FEPTC, without prior exemption by the Division Chair, will be reviewed based on the dossier materials available to the FEPTC at the time they begin their review.

**Professor** – For promotion or appointment to the rank of Professor, the faculty member will be evaluated in the areas of teaching, scholarship and service. The faculty member must meet the criteria for, and/or hold the rank of Associate Professor. In addition, the faculty member must document sustained records of accomplishment in all three areas, and demonstrate excellence in teaching and either scholarship or service.

In addition to fulfilling the expectations noted above with respect to teaching, scholarship and service, all appointees are expected to demonstrate peer esteem and professional collegiality.

**Collegiality** - refers to the professional criteria relating to the performance of a faculty member's duties, including collaborative efforts, engagement in shared academic and administrative tasks, professionalism and integrity, and mentorship.

**UWA** Appointment to the rank of Professor requires outstanding, mature scholarship as evidenced by accomplishments in teaching, and in research as evaluated in terms of national recognition.

Appointment to the rank of Associate Professor requires a record of substantial success in both teaching and research, except that in exceptional cases an outstanding record in one of these activities may be considered sufficient.

Appointment with the rank of Assistant Professor requires a demonstration of teaching and research ability beyond that ordinarily required of an instructor.

C. If your institution has clinical tracks, what are the expected standard levels for each level?

<b>UAB</b>	None
<b>ATSU</b>	We have clinical track and academic track. Clinical faculty can choose 2 of the categories like teaching and service. Faculty are expected to perform service to the school like committee memberships, admission requirements, screening course and course material development.
<b>MUC</b>	See answer to previous question

Clinical Instructor:

- will have successfully completed a program in dentistry, dental hygiene, dental assisting or other related field of study before joining the faculty and is willing to teach;
- is in a probationary appointment held normally for no more than five years and subject to annual review by the Department Head with the Chair of the Division in which the majority of the candidate's teaching occurs.

Clinical Assistant Professor:

- normally holds this rank for a minimum of five years, but some clinicians will remain in the position for much longer;
- has demonstrated competent teaching abilities by formal assessment;
- has continued to demonstrate competence in clinical practice and is in good standing with the regulatory authority relevant to their professional practice (e.g., College of Dental Surgeons of BC; College of Dental Hygiene of BC);
- has participated in continuing education programs relating to teaching;
- participates in administrative service to the university or a professional organization;
- has taught continuously for at least one three-hour teaching session per week for over two academic years;
- is subject to review every 2<sup>nd</sup> year by the Department Head with the Chair of the Clinical Division in which the majority of the candidate's teaching occurs.

Clinical Associate Professor:

- normally holds this rank for 5 to 10 years, but some clinicians will remain in the position for much longer;
- has demonstrated superior teaching abilities by formal assessment;
- has helped directly to develop one or more teaching courses or modules;
- participates in administrative services for the university or a professional organization;
- has taught continuously for at least one three-hour teaching session per week for over five academic years at our school;
- has other academic accomplishments that justify appointment at or promotion to this rank;
- is subject to review every 3<sup>rd</sup> year by the Department Head with the Chair of the Clinical Division in which the majority of the candidate's teaching occurs.

Clinical Professor:

- is recognized by formal review as an enthusiastic and effective leader in the Faculty of Dentistry's education program;
  - has made significant contribution to clinical practice or clinical teaching that are documented in publications or other media;
  - has participated nationally or internationally as a leader in one or more profession organization;
  - has taught continuously for at least 10 academic years at our school;
  - participates in administrative service to the University;
  - has other academic accomplishments that justify appointment at or promotion to this rank;
- is subject to review every 3<sup>rd</sup> year by the Dean with advice from the

Department Head and the Associate Dean for Clinical Affairs and from other members of Faculty as needed

<b>LLU</b>	See answer to previous question
<b>UNLV</b>	See answer to previous question
<b>OHSU</b>	See answer to previous question
<b>ROSE</b>	No clinical track distinction, at this time
<b>UOP</b>	Not applicable to our school
<b>UCLA</b>	Appointments in Professor of Clinical (X) Series (in our case “Professor of Clinical Dentistry”) are made in the cases of academically qualified individuals whose predominant responsibilities are in clinical teaching and patient care, and who hold compensated position in the School of Medicine, School of Dentistry or an affiliated or associated hospital or other institution. For appointment and advancement in this series, individual’s teaching, clinical, and creative achievements are evaluated. Some individuals will have primary emphasis in clinical activities and professional competence; other individuals will have an emphasis on research activities, occasionally as an independent researcher or (more commonly) as a collaborative investigator. In addition, it is expected that all Health Science Clinical Professor appointees will contribute creatively to administrative, academic or research activities in the department or the school, and will participate in University and public service. Tenure or Security of Employment is not granted in association with appointment to this series.
<b>UCSF</b>	See answer to previous question
<b>USC</b>	See answer to previous question
<b>WUHS</b>	Currently there are no clinical tracks. Members of the faculty appointed as non-Tenure Track are individuals who devote the majority of their time to clinical teaching and patient care. Faculty members on the non-tenure track are expected to contribute to the mission and functioning of the College by participating in service and demonstrating a scholarly approach to teaching and clinical activities. Service activities may include, but are not limited to participation in College of Dental Medicine and/or University committees, and service in professional organizations
<b>UWA</b>	Clinical appointments are normally given to an individual who holds a primary appointment with an outside agency or non-academic unit at the University. If the primary appointment is with another university, Clinical professors must be a Professor at that institution.

## **V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

- A.** What, if any, are the implications of the following article? Summarize and report the discussion.

*Dental Composite Restorations and Psychosocial Function in Children.* Maserejian Nancy N., Trachtenberg Felicia L., Hauser Russ, McKinlay Sonja, Shrader Peter, Tavares Mary, and Bellinger David C. Pediatrics originally published online July 16, 2012. DOI: 10.1542/peds.2011-3374.  
<http://pediatrics.aappublications.org/content/early/2012/07/11/peds.2011-3374.full.pdf+html>

<b>UAB</b>	No response submitted
<b>ATSU</b>	We still teach amalgam in both clinic and pre-clinic

**MUC** I was unable to access the article as the website required a log-in, which I do not have. The following seems to be a good review of the article, however. Some of their comments are included.

**Evidence that Bisphenol-A Exposure is Not Associated with Composite Resin Dental Fillings**, G. Mark Richardson, Adjunct Professor, University of Saskatchewan

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“Although Maserejian et al, made efforts to control for confounding factors in their analysis, they did not control for all possible confounders. One major source of BPA exposure not addressed was through consumption of canned foods and beverages, the interior of these cans being coated with a polymer based on BPA.”

“...it will be essential that exposure via consumption of canned foods and beverages by participants be quantified and statistically controlled in any future study designed to validate their hypothesis.”

“Also, within the NECAT, the composite resin group had a maximum urinary mercury concentration that exceeded that of the group receiving amalgam fillings.”

“...given mercury's known association with numerous neurological and neurobehavioral effects, controlling for background Hg exposure would also be essential.”

**UBC** So, the article has received a lot of attention and opens up the discussion about the safety of composite materials. However, the study itself was data mining from the New England amalgam trial (which was a good, prospective randomized clinical trial). The data was never intended to analyze the safety of resins. Dr. Kavita Mathu-Muju, Pediatric Dentistry UBC

*From the article:*

*“Owing to the lack of relevant biomarker data in NECAT, we were unable to examine whether children with greater composite exposure had increased concentrations of potentially leached monomers, such as bisGMA, or BPA, which may plausibly cause the observed associations. Thus, it remains unclear whether our observed associations are attributable to BPA or to some other chemical component of the composite intervention.”*

So this invites the search for more conclusive data, but no current good evidence to change our protocols.

**LLU** No response submitted

**UNLV** No response submitted

**OHSU** The results from this study are inconclusive. The study does not eliminate other sources of BPA exposure such as the lining of canned goods. More research and longitudinal trials are needed. This study in itself has not changed our use of resin composite including the use of composite as a sealant in children.

**ROSE** No response submitted

**UOP** Underlines the need for CAMBRA. Demonstrates a somewhat loose association between bisGMA composites and psychological changes. Definitely requires more evidence.



<b>UCLA</b>	<p>The use of the <u>self-reported</u> Behavior Assessment System for Children (BASC-SR) and <u>parent-reported</u> Child Behavior Checklist (CBCL) to measure psychological function versus some direct measurement must be considered with regard to the strength of the evidence reported here. The degree to which variables other than restoration type were controlled is also a concern. That said, the findings here along with other similar findings referred to in the discussion, oblige us to be aware of these findings and monitor the literature for additional investigations into this issue. This evidence, however, does not rise to the level of compelling to the extent that existing material selection protocols and best practices should be changed.</p>
<b>UCSF</b>	<ol style="list-style-type: none"> <li>1. The study appears to be nicely designed and the analyses are good. Note that there are some non-statistically significant results, although worrisome trends.</li> <li>2. However, there are many confounding variables that may lead to the conclusion derived from the study, and therefore, more studies are needed. This study is not well controlled, as some of children have both composite and amalgam as restorations. No sampling of BPA leakage is done in the study. Are they sure it is BPA and no other chemicals or factors causing the problem? Is there a biomarker? Perhaps, they should include a group without any restoration at all as a baseline. Children with restorations may generally more prone to have behavior issue or psychosocial function issue.</li> <li>3. It would be good if they can objectively determine how much leakage is occurring and what is the true effect on children, if any? Some people may argue placing a stainless steel crown on the anterior teeth could have more tremendous impact on psychosocial function in children? I will suggest obtaining some comments from the American Academy of Pediatric Dentistry about this article.</li> <li>4. If the conclusion is true, wouldn't that affect adult as well, since many adults choose composite over amalgam these days</li> <li>5. What is the value for the inter-examiners calibration? How many examiners are there?</li> <li>6. Is the psychosocial function measurement validated?</li> <li>7. It appears that many materials in dentistry are claimed to be problematic to health (e.g. fluoride, amalgam, dental radiograph, and etc.) What other alternative materials should we use? Should we stop using composite based on a psychosocial function study? What are the risks &amp; benefits? What are the alternative treatment options?</li> <li>8. For a composite restoration or sealant placement, one should pumice the resins surfaces to remove the oxygen inhibition layer, which is known to inhibit the free radical polymerization, resulting in polymers with uncured surfaces.</li> <li>9. The resin contents in compomers are not as great, as composite, since the predominant materials are glass ionomers. So that may be what they see in the result difference between compomers and composites.</li> <li>10. Amalgam is still a viable option for restorations in children.</li> </ol>
<b>USC</b>	No response submitted

**WUHS** The study was a derivative product from the NECAT (New England Children's Amalgam Trial) to measure the neuropsychological and renal effects of dental amalgam in children. Results showed no harmful effects of amalgam. However it claims to have found worse psychosocial outcomes in children who received procedures involving resins (composites and compomers). The investigation claims that there is a correlation between the release of BPA (bisphenol A) from composite resins and psychological changes in children — animal studies have shown that early life exposure resulted in increases in defensive aggression, hyperactivity, impaired learning and altered play.

In the discussion section, the research describes the limitation and variables of this study. Measurements were calculated on composite and amalgam restorations placed on posterior teeth. However, NECAT did not collect data on other sources of BPA (sealants previously placed), and sources such as canned foods and beverages. The reliability of results reported by parents, and/or patients rather than a medical diagnosis of psychosocial alterations. The residual monomer released from dental resin after curing needs to be determined for each material used in the study. The concept of psychological effect from dental resin requires further research before a conclusion is achieved.

**UWA** This article does draw the attention to the potential adverse effects of composite resin filling on children's health. The data of this study showed that children with higher cumulative exposure to composite had poorer follow-up scores on self-reported Behavior Assessment system when compared to children with compomer or amalgam filling materials. Based on this article, we should be more cautious when we consider choose composite resin as the filling material for the children. However, these results might not be due solely to the difference of the dental materials. For instance, the difference in the treatment procedures and treatment time could also be contributing factors. Thus, longitudinal trial studies need to be conducted in order to confirm the result of this study. It's still premature to conclude that the bisGMA is definitely associated with impaired psychosocial function in children based on one research study.

B. In the last five years, has your College/School made policy changes that impact/restrict the utilization of amalgam? If yes, what are the changes and the rationale for such changes?

**UAB** No

**ATSU** No, we teach amalgam in the pre-clinic as 50% of the projects on our posterior teeth restorations. In the clinic, due to patient preference, amalgam is not used as much as composite, about 20%.

**MUC** No

**UBC** There have been no changes made to the utilization of amalgam. The CDA recommends limiting use in children and pregnant women, but the Biomedical Research does not support that recommendation.

**LLU** No response submitted

**UNLV** No

**OHSU** No

**ROSE** Our present policy places the use of amalgam based upon reasonable diagnostic and treatment planning criteria as an option for treatment upon patient instruction and patient choice. We still consider amalgam to be an excellent material in many instances.

**UOP** No

**UCLA** None whatsoever

<b>UCSF</b>	No
<b>USC</b>	No, however, there has been a lot of discussion this year on this topic. Elimination of amalgam class within five years seems very likely.
<b>WUHS</b>	No. Both materials are available for restorative cases. The majority of our patients choose to have their restorations in composite because our fees are the same for amalgam and composite. However, in the majority of community clinics where our students rotate the bulk of material used is amalgam.
<b>UWA</b>	No

**VI. REGIONAL CODE AGENDA**

*To be established by the respective Region and Regional Director. Please also report on responses to the Regional Agenda by all participants.*

**No Regional Agenda Submitted**

# **Consortium of Operative Dentistry Educators**

**(CODE)**



## **REGION II (MIDWEST) ANNUAL REPORTS**

Region II Director:  
Dr. Christa Hopp  
SIU  
Alton, IL

Region II Annual Meeting Host:  
Dr. Gary Stafford  
Marquette University  
Milwaukee, WI

Region II Annual Report Editor:  
Dr. Gary Stafford

Chapter 2

## CODE REGIONAL MEETING REPORT FORM

**REGION** II Midwest

### LOCATION AND DATE OF MEETING:

University: Marquette University School of Dentistry

Address: Milwaukee, WI

Date: September 19 – 21, 2012

### CHAIRPERSON:

Name: Dr. Gary L Stafford

Phone #: 414-288-5409

University: Marquette University

Fax #: 414-288-3586

Address: Milwaukee, WI

E-mail: gary.stafford@mu.edu

**List of Attendees:** Please complete the CODE Regional Attendees Form (following page)

### Suggested Agenda Items for Next Year:

No suggestions submitted

### LOCATION AND DATE OF NEXT REGIONAL MEETING:

Name: Dr. Christa Hopp

Phone #: 618-474-7052

University: Southern Illinois University

Fax #: 618-474-7141

Address: Alton, IL

E-mail: chopp@siue.edu

Date: September 18 – 20, 2013

Please return all completed enclosures to  
Dr. Larry D. Haisch, National Director, UNMC College of Dentistry;  
40<sup>th</sup> and Holdrege Streets; Lincoln, NE 68583-0740.

**Deadline for return: 30 Days post-meeting**

Office: 402 472-1290 Fax: 402 472-5290 E-mail: lhaisch@unmc.edu

Also send the information on a disk and via e-mail with all attachments.

Please indicate the software program and version utilized for your reports.

## CODE Region \_\_II\_\_ Attendees Form

NAME	UNIVERSITY	PHONE #	FAX #	E-MAIL ADDRESS
Larry Haisch	UNMC	402-472-1290	472-472-5290	lhaisch@unmc.edu
William Johnson	UNMC	402-472-9406	402-472-5290	wwjohnson@unmc.edu
Natalia Restrepo-Kennedy	Iowa	319-335-7207	319-335-7267	natalia-restrepokennedy@uiowa.edu
Scott Shaddy	Creighton	402-280-5226	402-280-5094	shaddy@creighton.edu
Christa Hopp	Southern Illinois	618-474-7052	618-474-7141	chopp@siue.edu
Ana Elashvili	Colorado	303-724-7074	303-724-7079	ana.elashvili@ucdenver.edu
John Purk	UMKC	816-235-2168	816-235-5524	john.purk@umkc.edu
Ron Santilli	Marquette		414-288-3586	ron.santilli@mu.edu
Toni Roucka	Marquette	414-288-6088	414-288-2586	toni.roucka@mu.edu
Gary Stafford	Marquette	414-288-5409	414-288-2586	gary.stafford@mu.edu

**2012 NATIONAL CODE AGENDA  
REGION II  
SUMMARY RESPONSES TO NATIONAL AGENDA**

**(Editor Note: Questions condensed for printing purposes)**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**NO REGIONAL SUMMARY RESPONSES SUBMITTED**

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

- I. MILLENNIAL IMPACT**
- II. DIGITAL DENTISTRY**
- III. RESTORATIVE DENTISTRY**
- IV. SCHOLASTIC**
- V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**
- VI. REGIONAL CODE AGENDA**

## 2012 NATIONAL CODE AGENDA

(Evidence cited where applicable)

September 19-22, 2012

Report on the proceedings of CODE Region II

Haisch LD (ed.) Code Regional Annual Reports 2012

<http://www.unmc.edu/code/>

### Region II School Abbreviations

COLO	University of Colorado	MINN	University of Minnesota
CREG	Creighton University	UMKC	University of Missouri -KC
IOWA	University of Iowa	UNMC	University of Nebraska
UMAN	University of Manitoba	SASK	University of Saskatchewan
MARQ	Marquette University	SIU	Southern Illinois University

## GENERATION Y/MILLENNIAL DENTAL STUDENTS

### Background:

During a recent ADEA (American Dental Education Association) board meeting in Washington, D.C., 40 millennial dental students discussed their perceived strengths and weaknesses and other trends to shed light on how schools can provide better dental education. Millennials are those students born between 1979 and 1994. The dental students said they use technology constantly to access information, conduct business and stay in touch, and that the Internet, text messaging, digital music, and downloads were all vital to their lives. The students expressed a preference for the ease of use of technology, but wanted to ensure that personal interaction remained a key part of their learning experiences. Many students indicated that their best academic experiences were those that involved a great deal of hands-on learning and allowed them to study in a group setting. The students also felt strongly that the best professors were those who care whether students were learning class materials, rather than just memorizing them, and those who made themselves available for help when necessary.

### Millennial Generation (Generation Y):

1. **Definition:** a term used to refer to the generation, born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.
2. **Common Traits:**
  - **Tech-Savvy:** Generation Y grew up with technology and rely on it to perform their jobs better. Armed with BlackBerrys, laptops, cellphones, and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through e-mail and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations.
  - **Family-Centric:** The fast-track has lost much of its appeal for Generation Y who is willing to trade high pay for fewer billable hours, flexible schedules and a better work/life balance. While older generation s may view this attitude as narcissistic or lacking commitment, discipline and drive, Generation Y have a different vision of workplace expectations and prioritize family over work.
  - **Achievement-Oriented:** Nurtured and pampered by parents who did not want to make the mistakes of the previous generation, Generation Y is confident, ambitious, and achievement-oriented. They have high expectations of their employers, seek out new challenges and are not afraid to question authority. Generation Y wants meaningful work and a solid learning curve.
  - **Team-oriented:** As children, Generation Y participated in team sports play groups, and other group activities. They value teamwork and seek the input and affirmation of others. Part of a no-person-left-behind generation, Generation Y is loyal, committed and wants to



be included and involved.

- **Attention-Craving:** Generation Y craves attention in the forms of feedback and guidance. They appreciate being kept in the loop and seek frequent praise and reassurance. Generation Y may benefit greatly from mentors who can help guide and develop their young career.

## **I. MILLENNIAL IMPACT**

### **A. Classroom/Didactic Experiences**

1. Has the way your department teaches the didactic component of restorative dentistry theory or concepts changed significantly in the last 10-12 years? (e.g. traditional class lectures replaced with small group discussion session, or most of the didactic curriculum is delivered on-line).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**COLO** It did change, but little. We still give traditional lectures, but do use technology more. Our students do bring computers on every lecture. PowerPoint presentations are placed on Blackboard. We do use technology like: Audience Response System. Depends on the course, but we do try to have small group discussions.

**CREG** No.

**IOWA** No, they did not. At the University of Iowa the freshman and sophomore students receive traditional classes. However, they have ICON, which is a blackboard that keeps the power point lectures. All the D2 class attends the lectures, though during clinic they are distributed in small groups. They will be distributed in preventive, radiology and operative clinic. The junior students are in smaller groups 18 to 20 students during the rotation of operative clinic. They do Evidence Based Dentistry lectures.

**UMAN** No response submitted

**MARQ** No for the most part. We do now allow audiotaping of lectures and utilize the latest technology but for the sake and ease of presentation; not necessarily because of the way students learn.

**MINN** No response submitted

**UMKC** We use traditional classes and laboratories; we use Blackboard for posting of all lectures and any supplemental material; we can use Tegrity for recording lectures; we no longer hand out lecture notes. Have to be efficient because we are competing against other courses and the students take too many courses. Goal is to use their time as efficient as possible. Online delivery takes too much time. We assign research topics or group assignments so they have to talk with one another. The purpose is to increase the dialogue or exposure to the material where they are forced to work in groups. Blackboard availability for course instruction and posting of notes. Ease of technology and to use the Ipad.

**UNMC** The style of teaching has not greatly changed. In addition to lectures and demonstrations, most lectures are placed on Blackboard. Faculty have the option of being video recorded, and this is also placed on Blackboard.

<b>SASK</b>	No response submitted
<b>SIU</b>	The delivery of information has changed moderately over the past 10 years to a more technology based format. Specifically, the lectures are formatted into PowerPoint or other forms of electronic presentation, grades are delivered through a web-based system (Blackboard) along with syllabi and access to lecture materials. All of the above changes were influenced by the availability of the technology and the ability and interest of the students to utilize this format of information delivery. The transition to electronic delivery of information was influenced/encouraged/required by the school's administration in order to create consistency in the system.

#### **B. Pre-Clinical Laboratory Experiences**

1. Has the way your department teaches the pre-clinical laboratory component of restorative dentistry theory or concept changed significantly in the last 10-12 years? (e.g. traditional work benches replaced with high tech manikin labs or significant use of patient simulators, like DentSim).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

<b>COLO</b>	Yes, we do have high tech manikin labs. We do try to provide more demonstrations and videos, to make easier to students to understand the concept. Technology does improve rapidly and gives us opportunity to improve many ways. The concepts of teaching Operative dentistry have moved to more prevention. We do teach sealants and preventive resin restorations in our pre-clinical laboratory.
<b>CREG</b>	Yes. Manikin Lab and its appeal to the students.
<b>IOWA</b>	Yes, the pre-clinical laboratory has the high tech manikin. A simulation clinic within the past 10 years. Instructor station using extensively multimedia presentations. PPT (POWERPOINT), Elmo, Demo manikin. Grading room: blinded evaluation. The students are familiar with technology. Technology facilitates better transfer of knowledge and skills.
<b>UMAN</b>	No response submitted
<b>MARQ</b>	No, we have been in this sim lab since 2002. We are just now in the process of expanding and upgrading. We have computers at each work station. We are moving into the digital age for convenience.
<b>MINN</b>	No response submitted

<b>UMKC</b>	<p>We use 8 minute Ipad videos during operative lab demonstrating the criteria and procedures. Also used to calibrate the faculty. We have developed many videos and short learning videos for student use on Ipads that they can access during the laboratory. We have made videos through the Endodontic microscope to show the making of the preparations. We have short presentation before labs. Some faculty text in the clinic rather than use pagers. We use the “learn a prep” on bench top. We only use typodont with manikin head and cheeks. Because of dust don’t use extracted teeth except for placing sealants. We have a summer between 2-3 year where they can do cutting on extracted teeth and etching and placing sealants and bonding agent on extracted teeth in the clinic. One of our biggest disappointments is the lab. Suction does not work and water does not work and the lab is a huge dust trap when extracted teeth are used. We try and get the students into the clinic earlier. In the 2nd semester of operative lab students are in the lab <math>\frac{3}{4}</math> of time then they have their first operative experience in the clinic at the last <math>\frac{1}{4}</math> of the lab time. We show the students resin composite restored and sectioned to show them all the voids in the material and the pooling of the bonding agent in the corners of the prep. Personal Ipad technology and ways students prefer to interact and communicate. Personal Ipad technology and ways students prefer to interact and communicate.</p>
<b>UNMC</b>	<p>One operative course utilizes our clinic with manikins on the patient chairs. This simulates the clinical experience quite well. We just converted to an all-digital record and the D-2 students will be entering the procedures completed on the manikins in dummy records within our EDR system. It is hoped that this will make them more familiar with the EDR prior to entering the clinic the second semester of their D-2 year. We don’t feel that any changes that we have made are due to generational differences, but rather due to the availability of new technologies.</p>
<b>SASK</b>	<p>No response submitted</p>
<b>SIU</b>	<p>Theory and concept has not changes significantly, however, curriculum and facilities has or will change in the near future. The changes to the pre-clinical lab courses were not significantly influenced by generational characteristics. Currently traditional work benches are being used pre-clinically but are slated to be replaced within the next year by the construction of a new laboratory to be furnished with new simulation units. The sequence of the operative curriculum has changed to accommodate the placement of all courses needed for the national board’s part one into the first year. The two core operative courses are now taught in sequence in the second year, immediately prior to the students entering the clinic with patient’s assigned. Moving the Operative I course has led to transitioning the laboratory procedures to all being done within the simulated manikin head, no longer bench top.</p>

### **C. Clinical Experiences**

1. Has the way your department conducts clinical teaching of restorative dentistry changed significantly in the last 10-12 years? (e.g. discipline clinics replaces by general dentistry clinics, traditional clinical requirements abandoned for “activity points”)
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990’s.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school’s

leaders or curriculum).

<b>COLO</b>	We have Comprehensive care in our clinics. Comprehensive care has been in Colorado dental clinics about 20 years or more now. It does include all parts of dentistry except: oral surgery, endodontic and periodontics. DS students start to see patients fall semester of their second year and ISP (international program) students start to see patients in summer semester of their first year. All students are divided into 4 teams and then to practices. Each practice has 10 to 13 students. Students at our school also do go to the Advanced Clinical Training & Services (ACTS) in which they provide dental services in an undeserved community.
<b>CREG</b>	Not considerably. There is greater weight applied to activity points than before; however, requirements of operative procedures is still the driving force.
<b>IOWA</b>	No. The operative department is competency driven. They do not have requirements; they have three competencies during the two months of rotation and they need to be totally independent with the procedures.
<b>UMAN</b>	No response submitted
<b>MARQ</b>	No. Our comprehensive care model has been in place for 12 years.
<b>MINN</b>	No response submitted
<b>UMKC</b>	Yes. We have minimal department requirements and instead students have to complete a certain amount of time units. Been doing this for 30 years. Switched from departmental requirements to comprehensive care. Awareness that using people is not ethically correct. It was changed because the departmental requirements resulted in patients being used too much. Treating patients for comprehensive care means the patient only gets what they need.
<b>UNMC</b>	No, we still have discipline-based clinics and have minimum essential experiences that have to be met. We have recently added an expected production goal for the students. The only other change is that we are sending students out for longer service learning experiences. Additional service learning that cuts into our clinic time with the students. This change has been mainly due to the philosophy of our administration.
<b>SASK</b>	No response submitted
<b>SIU</b>	The clinical teaching of restorative dentistry has changed minimally or the past 10 years. We are currently using a discipline specific format in which students schedule patients in a chair specific to the procedure planned for the patient. The students have a list of clinical experiences at which competency must be proven along with a point total needed for each discipline. No changes due to generational characteristics. Axiom, the computer software utilized in our clinic has influenced how teaching is conducted in the clinic along with the introduction of digital radiography and an increase in implant dentistry.

## **II. DIGITAL DENTISTRY**

- A. Has your school incorporated digital dentistry as impression taking, model formation, CAD-CAM, etc.?
- B. Which technologies are you using? Please name the brands.
- C. What have been your experiences with these technologies?
- D. To what degree are they used in the teaching program?
- E. Has this technology had a positive or negative impact on clinic income?
- F. Are all interested faculty trained or is there a specific “digital guru”?
- G. Has it replaced conventional techniques or does it augment conventional techniques?
- H. What is the response from the students?

- J. Are intraoral digital impressions taken or conventional impressions which are scanned afterwards?
- K. Do the students realistically have enough time to totally complete a restoration from preparation to cementation in a single appointment (morning or afternoon session)?
- L. Please indicate the time length of a morning or afternoon clinic session.

<b>COLO</b>	The University of Colorado, School of Dental Medicine, has NOT incorporated digital dentistry, model formation, CAD-CAM, etc. We do have a new committee that has been working on looking at different digital technologies very intensively during last year. But as for now, we do not use any of these technologies. We do have “digital gurus”. Our clinic sessions are 3 hours long, but we do ask students to be finished half an hour before the session is over to have their note approved.
<b>CREG</b>	Yes in a limited way. The Prosthetics department received a grant to purchase and use an iTero impression capture unit. The iTero unit has shown 90 or 95+ percent success for cast restoration procedures. The iTero technology is used consistently on the clinic floor. Negligible effect, there is still a lab fee involved, and a temporary still has to be made. Specific “digital guru”. iTero augments. Generally, the students like the iTero unit. It’s digital, and they don’t have to bother with capturing a PVS impression. Intraoral impressions are captured. The iTero electronically sends the impression to a lab where it is fabricated and sent back after a number of days. 3-4 hours.
<b>IOWA</b>	Yes, however, the digital dentistry is managed more in prosthodontics and family dentistry departments. CEREC 3D and LAVA 3M. It is a huge learning curve. The students have exposure to the technology; however, they do not use it much during clinic with the patients. One of the drawbacks for our department is the lack of faculty training. Little. CEREC is the treatment that is teach only if a case will be adequate. Therefore, not all the students are able to have exposure to CEREC treatments in the clinic floor. Some faculty have “digital gurus.” Our dental school is very conservative, so it will take some time until digital technology will be incorporated in the operative department. It has not been replaced. They are very interested and they want to have more information about it. We take more conventional impressions. No, they are not. It will take two weeks for them to be completed. The time is: 3 hours during the morning from 9 to 12:00 p.m. and 4 hours during the afternoon from 1:00 to 5:00 p.m.
<b>UMAN</b>	No response submitted
<b>MARQ</b>	Yes. Digital impressions (Lava) and Cad-Cam (Cerec). Very positive. The students love it. Minimally but increasing. Grad pros mostly. The new sim lab will have some of this equipment available when completed. Don’t know. Few are trained / interested. Augment. Very positive. Intraoral. Yes, with a lot of help and guidance. 3 hours.
<b>MINN</b>	No response submitted
<b>UMKC</b>	Presently it is only used in the AEGD clinic; We are in the process of installing an Innovation Clinic that will have these items. We use ICat for implant placement. iTero was recently introduced by manufacturer with a lecture by faculty. Too new to evaluate. Have not used it that much yet. Lecture and demo only, except for use in AEGD program. No impact on clinic income yet. One person presently is trained on the equipment. It augments conventional techniques for now. Too early to tell. The lab uses it to make all ceramic crowns with cad-cam at the lab. They don’t do it yet. 3 hours.

<b>UNMC</b>	<p>Yes. CEREC 3-D. CEREC is first introduced in Dental Anatomy (Fall, D-I year), where it use is demonstrated to the students. They are in small groups and the faculty help them to make a digital impression and design a restoration. In Operative I (Spring, D-1 year) the students prepare a dentoform tooth for a ceramic onlay, make a digital impression, design and mill an onlay. In Operative II (Fall, D-2 year) the students repeat the above exercise, but they also polish and cement the onlay. It is available in the clinic, but there is no requirement that students have to complete a CEREC restoration. It is not utilized enough to have any impact on clinic income.</p> <p>The operative faculty and many of the prosthodontic faculty have been trained, but almost all of the clinical cases have been supervised by one faculty. No, it has not replaced conventional techniques. They seem to enjoy working with it in the pre-clinical area, but we have not seen a tremendous interest in it in the clinical area. Both techniques are used. If there is a difficulty getting good intraoral impressions we fall back on conventional impressions and casts that are scanned by the CEREC camera. Generally they do have enough time to complete the entire process in one four hour clinic session. .</p>
<b>SASK</b>	No response submitted
<b>SIU</b>	<p>Yes. We have two CEREC acquisition and milling units to utilize in our clinic and 5 used in our pre-clinical laboratory. Faculty opinion varies. Only specific faculty have been trained and use the CEREC. The clinic has “CEREC chairs” one day a week that they can schedule patients in and perform inlay, onlay or all ceramic crown restorations utilizing the system. The CEREC system is introduced to the students in the second year Operative II pre-clinical laboratory course in which they prepare an inlay and an onlay on dentoform teeth and receive a demonstration of powdering, scanning, milling, and seating the restoration. In the fourth year, an “Advanced CAD/CAM Dentistry” course is offered as a selective in which 10 students use the 5 pre-clinical machines to perform the procedures start to finish on a dentoform. A limited evaluation of the impact CEREC has had on our clinic income reveals a negative profit margin. One operative and three fixed prosthodontic faculty have been trained to use the CEREC machines. Currently only the operative faculty has designated CEREC chairs in the clinic though the other faculty will cover use of the machine in “fixed” chairs. One part-time faculty also covers CEREC chairs on the same day as operative. CEREC acts as an additional restorative option for the students and patients. It has not replaced conventional techniques. The students are interested in the technology. If the student schedules a “CEREC” chair digital impressions are taken if at all possible and the procedure is done start to finish similarly as it would be done in private practice. If the student schedules a “fixed” chair, the faculty ratio usually requires that an impression be taken and later scanned. Yes, this is done on a regular basis in the “CEREC” chairs. Heavy instructor involvement is required to achieve this though due to the students’ lack of experience with the procedure. 3 hours.</p>

### III. RESTORATIVE DENTISTRY

A. Are operative procedures in the clinics done the same way as taught in pre-clinics?

<b>COLO</b>	Yes, but we need to improve on calibration, especially with part time faculty
<b>CREG</b>	Yes

<b>IOWA</b>	Yes, however, the goal in the past few years is to try to standardize part time faculty
<b>UMAN</b>	No response submitted
<b>MARQ</b>	Yes minus etching and bonding composites
<b>MINN</b>	No response submitted
<b>UMKC</b>	Yes
<b>UNMC</b>	Yes
<b>SASK</b>	No response submitted
<b>SIU</b>	Yes

**B. Are the same materials, instruments and burs used?**

<b>COLO</b>	Yes
<b>CREG</b>	Yes, except that finishing carbides are used in lab, and finishing diamonds are used in the clinic.
<b>IOWA</b>	The instruments and the burs are the same. The materials can vary.
<b>UMAN</b>	No response submitted
<b>MARQ</b>	Yes, we believe in standardization
<b>MINN</b>	No response submitted
<b>UMKC</b>	Yes
<b>UNMC</b>	Yes, the same instruments and burs are used. We use the same instrument cassettes and bur blocks in both areas.
<b>SASK</b>	No response submitted
<b>SIU</b>	Yes

**C. If there are differences, how are they reconciled?**

<b>COLO</b>	NA
<b>CREG</b>	The differences are negligible.
<b>IOWA</b>	Preclinical – We explained to the students if a material is not used or a procedure can be different in a clinical case, so they will be explained the difference before they encounter the same situation in the clinical. However, some students will not remember this information and it needs to be explained again during clinical procedures.
<b>UMAN</b>	No response submitted
<b>MARQ</b>	NA
<b>MINN</b>	No response submitted
<b>UMKC</b>	With department chairs or section heads
<b>UNMC</b>	NA
<b>SASK</b>	No response submitted
<b>SIU</b>	No differences

**D. What methods/systems are taught for polishing composites?**

<b>COLO</b>	For composites we do use Dia Comp composite polishers (Brasseler), Enhance (Dentsply), and Super-Snap Polishing discs (Shofu).
<b>CREG</b>	We employ carbide finishing burs in the lab, and diamond finishing burs in the clinic. We also use the Sof-Flex disc system, and the Jiffy polishing system.
<b>IOWA</b>	<ol style="list-style-type: none"> <li>1. Contour with finishing burs and red softlex discs.</li> <li>2. Polish with silicon cups patients brushes. Polisher brushes and cups and points.</li> <li>3. Interproximal polishers such as epitex.</li> </ol>

<b>UMAN</b>	No response submitted
<b>MARQ</b>	Alpen Polishing System, Komet polishers
<b>MINN</b>	No response submitted
<b>UMKC</b>	12 bladed finishing burs followed by Brasseler discs.
<b>UNMC</b>	.Carbide finishing burs, Jiffy polishers, Sof-Flex discs, and interproximal finishing strips.
<b>SASK</b>	No response submitted
<b>SIU</b>	Students are taught to use cones and cups (Enhance) and aluminum oxide grit discs (Sof-Lex, 3M) to polish composite.

E. Are any bulk fill composite techniques taught? If yes, please describe.

<b>COLO</b>	No
<b>CREG</b>	Not at this time; however, our department is currently in the process of researching the SonicFil bulk fill composite resin material. In our studies, we are looking at depth of cure and surface roughness.
<b>IOWA</b>	Do not use the bulk fill composite
<b>UMAN</b>	No response submitted
<b>MARQ</b>	Paracore (dual core composite for core buildups only)
<b>MINN</b>	No response submitted
<b>UMKC</b>	No except for Paracore build-up material
<b>UNMC</b>	No, only if the preparation is very small.
<b>SASK</b>	No response submitted
<b>SIU</b>	A layering technique is taught

F. Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? What about new techniques – how long to implement into pre-clinic labs and clinics?

<b>COLO</b>	Depends on Material. To change composite, it can take couple years to bring the change. New techniques and materials we do incorporate new techniques into Sim-clinics first and then clinics. This can take also about two years before it is incorporated into clinics.
<b>CREG</b>	New materials may lag by about a year. New techniques are more immediate, unless they are dependent upon a new material.
<b>IOWA</b>	It takes from 6 months to 1 year.
<b>UMAN</b>	No response submitted
<b>MARQ</b>	Sim lab introduction first then clinic. Could take three years as classes matriculate through the curriculum.
<b>MINN</b>	No response submitted
<b>UMKC</b>	Materials – about a month or so. New techniques – have to calibrate the faculty first, might take a semester to do that.
<b>UNMC</b>	Usually we introduce new materials and techniques into the preclinical technique labs in the D-1 year. They then follow that class as they move forward into their clinical experience.
<b>SASK</b>	No response submitted
<b>SIU</b>	The time to introduce new materials is dependent on the agreement of the section faculty, clinic dean, and purchase approval. Techniques are introduced into the pre-clinic by the course directors and agreement with the course faculty within the Operative I and Operative II courses taught in the second year. Techniques are introduced into the clinic on an individual instructor-student basis.



#### IV. SCHOLASTIC

##### A. What is considered scholarly activity at your institution?

<b>COLO</b>	The quality and quantity of papers published in referred journals. These may include original research articles, review articles and extensive case/technique/application reports. The quality of the journals themselves and the position of authorship will also be considered. Contributions to textbooks.
<b>CREG</b>	Traditional research and publication is considered scholarly activity. Classroom and/or curricular innovation are now being credited as scholarly activity. Classroom and/or curricular innovation are not required activities.
<b>IOWA</b>	Published articles, peer review, committees, etc.
<b>UMAN</b>	No response submitted
<b>MARQ</b>	See response for part B
<b>MINN</b>	No response submitted
<b>UMKC</b>	Develop a new course or significantly change it. Articles, literature reviews, case reports or article reviewers.
<b>UNMC</b>	Peer-reviewed publications, extramural funding, journal reviewer or member of editorial board, journal editor, study section member (grant reviewer), consultant for private sector corporations, presentations at national or international professional meetings, patents and/or licensed inventions, publication of a book chapter or author of a textbook, etc.
<b>SASK</b>	No response submitted
<b>SIU</b>	Within the School of Dental Medicine, scholarly activity is considered research and publication.

##### B. What are the expected standards for Assistant, Associate, and Full Professors?

<b>COLO</b>	To evaluate Full-Time Tenure-Track Faculty members, there are three primary categories: 1. Teaching 2. Research and/or other scholarly activities, 3. Service. General statement an <u>assistant professor</u> is expected to have some successful teaching experience in dental education or equivalent. Criteria for an <u>associate professor</u> : Five or more total years full-time professor in appropriate higher educational settings or its equivalent, and education beyond the terminal degree; Promising accomplishment in research and/or other scholarly activities; Documented evidence of meritorious teaching, research and service activities. General statement Faculty at <u>professor</u> rank must have a minimum of five years at the rank of associate professor and demonstrate outstanding accomplishments in teaching and research and/or scholarly activity.
<b>CREG</b>	This is a distilled look at the ranks, highlighting some of the differences. Teaching Research (Clinical Sciences) Tenure Track <ul style="list-style-type: none"><li>- participates in classroom and/or lab courses</li><li>- participates in research/creative scholarly activity</li><li>- applies for external research funding</li><li>- develops and/or teaches one CE presentation once every two years</li><li>- publication</li></ul>

Teaching Research (Clinical Sciences) Non-Tenure Track

- participates in classroom and/or lab courses
- participates in research/creative scholarly activity (for rank increase)
- publication (for rank increase)

Clinician-Educator Tenure Track

- participates in research/creative scholarly activity (for rank increase)
- develops and/or teaches one CE presentation once every two years
- publication (for rank increase)

Clinician-Educator Non-Tenure Track

- participates in research/creative scholarly activity (for rank increase)
- publication (for rank increase)

Teaching Research (Basic Sciences) Tenure Track

**IOWA** Tenure track 30% (time for research and administration) vs. clinical that has 20% for administration. In the initial appointment a new faculty is appointed as Assistant. Tenure track Associate: needs to have 15-20- scientific articles published.

**UMAN** No response submitted

**MARQ** **Guidelines for Appointment, Promotion, and Tenure of Faculty**

***I. General Considerations***

University policy concerning appointment, promotion, and tenure are detailed in the Marquette University Faculty Handbook (Chapters 301, 302 & 304). This policy forms the foundation for MUSoD's guidelines. The present document, which was written by the MUSoD Promotion and Tenure committee (P&TC), provides an interpretation of the Faculty Handbook guidelines and an overview of the local promotion and tenure guidelines. The document is an adjunct to the Marquette University Faculty Handbook; Faculty Handbook policies will be followed for all matters regarding promotion and tenure, including due process and appeals of University decisions regarding promotion and tenure.

Marquette University is a tenure-granting institution. Granting tenure to a faculty represents a major commitment on the part of the University. Through tenure, the University seeks to retain outstanding faculty and protect a faculty member's academic freedom. This is essential to preserve high quality work in research, teaching, and service. Tenure is awarded only following explicit review and is not based on length of service. *Initial appointment, promotion, and awarding tenure are therefore separate actions.* Requirements for tenure typically include

- teaching ability rated as being of consistently high quality;
- scholarly achievements commensurate with rank;
- evaluations attesting to the high quality of the candidate's scholarship by independent authorities in the candidate's field of academic expertise; and
- service performance in line with the candidate's rank.

Through academic promotion, the University seeks to honor a faculty member's achievements as appropriate for length and type of appointment. Areas of achievement include

- teaching
- scholarly activity, and
- service.

It is obvious that a faculty member's achievements over time must be assessed individually, taking into account the member's appointment (as either regular or participating faculty), and the objectives of the member's hiring. In other words, individual faculty members have different responsibilities and opportunities for teaching, scholarship, and service. The assessment process must take such variation into consideration.

It is expected that all members of the faculty will perform satisfactorily in their teaching, scholarship, or service duties. Satisfactory performance and appointment length do not, in themselves, constitute reasons for promotion in academic rank. With increasing levels of experience, it is expected that faculty members will demonstrate a commensurate level of achievement in teaching, scholarship, and/or service, as appropriate.

A faculty member who teaches is expected to have thorough knowledge of the subject being taught, a demonstrated ability to communicate that knowledge to students, and the skill to motivate students to reach their potential. A faculty member whose major responsibility includes research is expected to have a wide and critical command of the field of his or her study. The most important indication of scholarship is the ability to make original contributions in one's field of knowledge, as evidenced by original publications in high quality journals, or creative professional contributions demonstrated through appropriate mechanisms, for example, the development and validation of a new clinical procedure. Finally, consideration must be given to subsidiary evidence of scholarship. Examples of this are the direction of, or significant participation in, research projects, particularly in the scholarly activities of learned societies and professional consultative service. Each faculty member is judged within the context of the responsibilities assigned by the Department, the School, and the University. There must be appropriate division of time and labor to accomplish these objectives. Assignment, monitoring, and adjusting of appropriate duties/responsibilities by the department chair is an important aspect of faculty development, in general, and for the professional advancement process. At MUSoD, clinical competence is highly valued within the institution and external dental community. Thus, attaining and maintaining a superior level of clinical excellence is considered to be an indication of scholarship. Examples of supporting evidence for this type of scholarship may include achieving and maintaining specialty board certification (e.g., "Diplomate" status in periodontics), election to fellowship in clinical dental societies that award such distinction based on published criteria (e.g., honorary member of AAP, ADA), and academic honors (e.g., honorary degree, awards of excellence).

The following guidelines are intended to clarify the process and expectations for achieving the academic ranks of Associate Professor and Professor, for regular faculty members with full time appointments. Examples are given to illustrate the types of activities that are consistent with these guidelines and support the essential mission of MUSoD (teaching, scholarship, and service). It is recognized that these examples are not exhaustive.

The acronym FTE (full-time equivalent) is frequently used to demonstrate the amount of a faculty member's time contribution to teaching, scholarship and/or

service activities. One FTE is a standard of one faculty working for 7.5 hours per day, 5 days per week, and 52 weeks per year. Typically, tenure-track faculty members in most U.S. dental schools contribute between 0.3 to 0.5 FTE to teaching, 0.3 to 0.5 FTE to research, and not more than 0.2 FTE to service tasks. However, full-time faculty members at MUSoD have been hired on 4 days per week contracts, on rare occasion. Since faculty productivity depends on the time available, FTE-based assessments do not best describe faculty work assignments at MUSoD. Hence, in the following sections, “half-days” will be employed as the standard unit of workload measurement, thus permitting a more equitable comparison among faculty with different contracts.

## ***II. General Performance Indicators for Appointments and Promotion***

MUSoD guidelines supplement those listed in the Marquette University Faculty Handbook (Chapter 302) and will be rigorously applied by the MUSoD P&TC. Examples of types of activities that are consistent with the general guidelines follow.

### ***A. Associate Professor (usually not before 6 years of employment)***

#### **Teaching**

1. Effective didactic and/or clinical teaching as evidenced by mastery of content and methodology; documentation by student and peer evaluations and a teaching portfolio.
2. Demonstration of innovation in educational practice and familiarity with various teaching methods by the development and validation of texts/manuals, educational software, and/or alternative learning environments; may also include innovative uses of multi-media and interactive technologies in teaching. (Innovation is further defined on page nine).
3. Responsibility for the design, organization, coordination, and evaluation of an entire course, series of lectures, or electronic learning environment (course or module director).
4. Participation in student/resident guidance and counseling, providing an outstanding role model for students/residents.

#### **Scholarly Activity**

Initiative and sustained progress in research or scholarly work that projects a logical sequence of activity into the future is the hallmark of a successful academic career. Such work can be laboratory or clinical research, by a single investigator or in collaboration with other faculty and/or graduate students and students. Evidence of scholarly activity, in general, is ranked as listed below.

1. Publications in peer-reviewed scientific and/or professional journals (publications that are co-authored must demonstrate a developing area of focus/expertise and unique scholarly contributions to the work). The emphasis for publications is impact and quality rather than absolute number. Journal impact factor, citation levels and internal/external reviewer assessments are typical sources to measure quality and impact. In multi-authored publications, the faculty member’s contribution must be described (e.g., developed methodology, executed all clinical assessments, and wrote introduction and discussion).
2. Extramural funding obtained through peer-reviewed mechanisms (e.g., NIH-NIDCR, NSF) is a strong indication of peer recognition and success. It is expected that faculty who have  $\geq 5$  half days assigned to research submit grant applications to major funding agencies.
3. Technology transfer, including patent applications, if it is a demonstration of

initiative and targeted pursuit of innovative research. Books, edited books and chapters in books related to the faculty member's area of expertise are also considered a form of scholarship.

4. Presentation of experimental data, published peer reviewed abstracts, in the form of posters or oral presentations, at national or international meetings of professional organizations and/or scientific societies are considered modest evidence of scholarly activity.

#### Service

1. Organization of and/or participation in community service activities for public education, care of the underserved, and/or student experiences where public/community recognition or peer acknowledgement can be documented, constitute evidence of service.
2. Chairing or serving on professional committees within the faculty member's department, School, University, affiliated institutions, local/state/regional/national levels, professional organizations, and/or government.
3. Providing consultation to other departments or schools within academia, in industry, government, or local/state/regional/national organizations.
4. Serving on thesis/dissertation advisory committees, research review boards, extramural grant review committees, journal review/editorial boards.
5. Maintaining active membership in key professional and/or discipline-specific organizations.
6. Being responsible for development of continuing education or other professional programs, at local or national levels.

*B. Professor (usually not before 10 years of employment)*

#### Teaching

1. Sustained high-level performance in the examples cited for Associate Professor.
2. Leadership through design, organization, coordination, and evaluation of courses or curricula (undergraduate, graduate). Making a significant, positive impact on the direction of the dental curriculum;
3. Demonstrating a high degree of innovation and maturity in teaching as documented in the teaching portfolio and contribution to professional forums (i.e. MedEdPORTAL) on the teaching and learning of dentistry.
4. Development and validation of educational methods and technologies.
5. Receives recognition for excellence in teaching by academic, professional or scientific institutions/organizations, industry, or government.

#### Scholarly Activity

1. Sustained high-level performance in the examples cited for the Associate Professor level.
2. First author or corresponding author of papers published in peer-reviewed scientific and/or professional journals. This work should establish an area of significant and sustained contribution over time as demonstrated by national/international peer recognition.
3. Receives significant and sustained extramural funding as an investigator for research or scholarly work (if time allocation for research is  $\geq 5$  half-days per week).
4. Receives invitations as a visiting scholar at other institutions.
5. Receives recognition for excellence in research or scholarship by academic, professional or scientific institutions/organizations, industry, or government.

### Service

1. Sustained high-level performance in the achievements cited for the Associate Professor level.
2. Appointment to leadership positions within the institution or its affiliates (has chaired major committees, departments, or has been a member of major decision-making committees within the School, University, and/or academic community at large)
3. Recognition as an authority by experts at other educational institutions, within the University, and/or by local, state, regional, or national organizations/institutions.
4. Senior administrative responsibility for a service, specific area of patient care or research lab, or didactic/clinical teaching.
5. Invitations to preside over, organize, or participate in national/international professional or scientific meetings/symposia/workshops/sessions.
6. Leadership positions in local, regional, national/international professional or scientific organizations.
7. Editor or regular service on editorial boards or review panels of professional and/or scientific journals.
8. Election to responsible positions on civic boards or organizations concerned with health care issues at the local, state, regional, national, or international levels.

### ***III. Academic Rank and Performance Assessment:***

The table below describes the rating criteria for faculty performance reviews. Assessment is based on the faculty's role on a project and the quality of execution (see Table below). The quality of this work is assessed comparatively (e.g., teaching scores, course instructor, principal investigator, co-author, impact factor of journal). In contrast, the quantity of teaching load and/or scholarly productivity is assessed as a function of the number of half-days assigned to the accomplishment being assessed. For example, a faculty member who is assigned 6 half-days per week to teaching is expected to be responsible for an area of teaching within their area of expertise and have a greater clinic or didactic teaching load than a faculty member with only 3 half-days per week assigned to teaching. However, it would be expected that both faculty members receive peer and student feedback reflecting high quality teaching. Similarly, a faculty with 6 half-days per week assigned to scholarly activities is expected to be a principal investigator of a research grant project and have greater productivity (as measured by the number of publications) in peer-reviewed journals than would a faculty member with 3 half-days per week. However, high quality scholarship is a requirement of all faculty activities; faculty members with varying levels of teaching responsibility should publish in high-quality peer-reviewed journals.

#### ***A. Associate Professor Regular Faculty***

Faculty members should have demonstrated excellence in teaching and research consistent with their roles and responsibilities in the department. Since individual duties vary greatly, excellence will be judged as having met the appropriate performance indicators (pp. 2-4). Determinants of excellence (pp.7-11) will be evaluated by the MUSOD P & T Committee, giving due consideration to the characteristics of the faculty member's appointment and division of assigned duties, and a recommendation will be made for appointment (or promotion) to the rank of Associate Professor based on the dossier.

### ***B. Professor Regular Faculty***

Individuals being recommended for appointment (or promotion) to the rank of *Professor* should have demonstrated sustained achievements as measured by the performance indicators of teaching and scholarly excellence described for the rank of Associate Professor. In addition, substantial additional accomplishments, acquired after the appointment at or promotion to the prior rank, should also be demonstrated (pp. 3-5). Determinants of excellence (pp.7-11) will be assessed by the MUSOD P & T Committee, giving due consideration to the characteristics of the faculty member's appointment and division of duties, and a recommendation made for appointment (or promotion) to the rank of Professor based on the dossier.

## ***IV. Rating Criteria for Performance Reviews***

<b>Rating</b>	<b>Description</b>
Excellent	Performance is of highest quality for teaching, scholarly activity, or service. Productivity and quality significantly exceeds performance standards.
Good	Performance is of good quality. Productivity and quality exceeds routine performance standards.
Acceptable	Performance meets routine standards and expectations are at an acceptable, but minimal level. Performance is average.
Unacceptable	Performance is not acceptable. Productivity and quality do not meet routine performance standards and expectations.

## ***V. Academic Areas of Endeavor: Determinants of Excellence***

Core elements of the University's mission are: the search for truth, the discovery and sharing of knowledge, and the fostering of personal and professional excellence. These core elements are reflected in the three academic areas of endeavor, i.e., teaching, scholarship, and service. At MUSoD, most regular faculty members' emphasis is on teaching (teacher – scholar model); hence, overall performance expectations are higher for their teaching activities than they are for scholarship. The heavier teaching load is also reflected in the 6, 2, and 2 half-day time allocations for teaching, research, and service, respectively, which is typical for most full-time, 5 day per week regular faculty members. However, reality demands flexibility and circumstances given, faculty can be hired with greater expectations for scholarship than teaching (scholar – teacher model). The hiring system of the School allows for substantial flexibility, and the end result is that differences in time allocation towards faculty achievements in the three major areas must be considered when a faculty portfolio is assessed.

### ***A. Teaching***

All faculty, tenure and non-tenure track, engage in teaching. The evaluation criteria for teaching effectiveness include teaching quality, educational innovation, impact upon students, and level of teaching responsibility. Evaluation of teaching does not lend itself solely to quantitative measurement. Multiple sources and methods must be considered and documented in the dossier. Adequate input, gathered from students, graduates, peers, department chairs, and other sources, provide information for the MUSoD P&TC, thus facilitating a fair assessment of teaching performance.

The importance of a carefully prepared teaching portfolio cannot be overemphasized. The University places a major emphasis on teaching effectiveness and demonstrating the development of one's teaching skills. Thus, the portfolio must be current, comprehensive, and inclusive of a variety

of indicators of quality teaching. For promotion to the rank of Associate Professor, indicators from the first three years of teaching are especially important because the portfolio should demonstrate an improvement in teaching skills/effectiveness over time. For promotion to the rank of Professor, indicators since the time of promotion to associate professor are especially important because the portfolio, in addition to demonstrating innovation, must exhibit a maturation of teaching approaches and methodologies that provide evidence that the candidate's performance has risen to the level of distinguished teaching. Some examples of maturation in teaching performance include evidence that the candidate has integrated their scholarly work into their teaching activities (the teacher-scholar model), evidence that the candidate has engaged in on-going, sustained self-assessment of their own teaching performance (and utilized these reflections to further the development of their teaching), and evidence that the candidate has made on-going changes in the curriculum that reflects their evolving teaching philosophy. This highly developed methodology should be reflected in corresponding changes in the candidates' statement of philosophy towards teaching, student letters, mentoring of faculty, and/or comments by peers.

Teaching Quality. The foundation of quality teaching is mastery of the subject, including proficiency in the spectrum of current literature in one's discipline. Essential components of teaching are: 1) the use of appropriate methods of instruction; 2) effective planning and organization; 3) clarity of written, oral, and visual presentation; 4) rapport with students of all abilities; 5) effective questioning and group facilitation skills; 6) stimulation of critical thinking and problem solving; 7) modeling professionalism; 8) mentoring students; 9) using appropriate methods of evaluation; and 10) providing adequate feedback to students. Teaching should be carried out with enthusiasm and energy.

Educational Innovation. Teaching excellence includes some degree of innovative effort. Innovations in teaching must accomplish more than mere change. Rather, new methods should demonstrate measurable advantage over those previously used. Examples of innovations in teaching are: 1) taking advantage of new technology to improve teaching effectiveness; 2) developing new learning experiences/environments, courses, programs, or curricula; 3) developing and validating unique methods to evaluate student learning, skills, and professionalism; and 4) developing effective methods to evaluate individual teaching, courses, or curricula. Measures of success in such innovation may include recognition through peer evaluation by internal or external content experts and national educational organizations, higher student scores on national or regional board exams, more students successfully pursuing graduate training and or board certification to name a few.

Impact Upon Students. A positive impact of teaching on students should be the primary educational goal of each faculty member. Increased knowledge, skills, and professional attitudes/values result from effective instruction. The ultimate outcome of effective teaching results in students achieving competency; this leads to proficiency and finally mastery of their chosen profession. This process is usually demonstrated through letters provided by previous and current students. Letters are solicited randomly to achieve a broad cross-section of student academic standing and didactic/clinical experiences.



Degree of Teaching Responsibility. The degree of responsibility assigned to a faculty member and the extent to which the faculty member's responsibilities contribute to the teaching programs of the school must be a consideration. Unlike traditional curricula, the new dental curriculum contains fewer discipline-specific courses. Some of these discipline specific courses have been replaced by integrated interdisciplinary material organized and delivered in a team fashion. Thus, requiring the candidate to direct a course or have primary responsibility for a teaching program as an indicator of educational leadership do not always apply. Facilitating and directing class sessions, dental rounds, discipline-specific lecture modules and/or laboratory pre-clinical instruction have increased in significance and are now considered important and necessary contributions to the dental school's educational mission and candidates must show flexibility and leadership in these settings. Despite these changes in the delivery of the curriculum, it is expected that faculty members will assume more responsibility for teaching as they gain academic experience.

#### **B. Scholarly Activity**

Scholarly activity is a highly valued component of the mission of the School and has two forms: 1) the compilation, synthesis, and transmission of current knowledge; and 2) the generation of new knowledge through original research/scholarship and publication of the findings. All regular faculty must engage in scholarly activity. It is critical to understand that both forms of scholarly activity are important and lend substantial support to a candidate's application for promotion and/or tenure. A documented record of manuscript publication in scientific or professional peer-reviewed journals is necessary to attain a performance rating of "good". Publications prior to employment at MUSoD will be considered as evidence of scholarship as they provide the basis for a continuing area of focus; however, the major emphasis will be on original publications since initial employment at MUSoD or since the last promotion. In all instances, the quality of the scholarly activity, as judged by authorities in the candidate's field, will be a critical measure.

For promotion to the rank of Associate Professor, a focused publication record in peer-reviewed, scientific or professional journals is especially important because a large number of publications on scattered topics (or in lower tier journals) will not be sufficient to meet the criteria requiring demonstration of emerging recognition and expertise in a field of competency. For promotion to the rank of Professor, the publication record must document an impact as evidenced by the frequency of publication citations and/or peer/professional recognition.

Compilation, Synthesis, and Transmission of Current Knowledge. All scholarly activity supports teaching and professional service. The compilation, synthesis, and transmission of current knowledge represent aspects of this activity that contribute to and advance scholarship. Such scholarly work may take many forms. Activities that support teaching and/or service may include:

- Publication of textbooks, book chapters, review articles, case reports, technical/clinical procedures, instructional materials, videos, and teaching manuals/syllabi;
- Development of new continuing education courses, electronic learning environments, and/or electronic educational resources;
- Editorship of professional journals; and

- Development of new methods and techniques in education, instrumentation, and/or technology.

Research and Publication. Research is the generation of new knowledge through use of the scientific method. Such research may be basic, behavioral, educational, or clinical in nature. It is most frequently expressed as manuscript publication in refereed journals. A reasonable and consistent level of research productivity is required; however, it is the quality of the investigative activity that is of primary importance in evaluation. The quality of research can be most readily measured through two peer reviewed mechanisms:

- Publication in scientific and professional journals; and
- The acquisition of grant funds from sources that evaluate proposals using a quality peer review system.

It is recognized that quality research can be conducted without the support of peer reviewed grant awards and that additional demonstration of the research record may include:

- Invitations to present findings at other universities or major scientific meetings;
- Appointment as a section or symposium chairperson;
- Receipt of awards or other special recognition for outstanding research;
- Appointment to grant review panels;
- Supervision of thesis/dissertation research.

Substitutive Norms. The School of Dentistry also recognizes substitutive norms for the requirement of scholarship. These are specific for appointments that are primarily administrative in nature and recognize excellence in performance of administrative duties. However, substitutive norms must be specified as promotion and tenure criteria upon initial appointment of the faculty member, and cannot be invoked retroactively.

### ***C. Service***

Service is related to those activities that pertain to professional expertise and application of that expertise to government, organizations, and the community. Faculty effort in this area of evaluation may include institutional programs/services, professional activities, and patient care. For promotion to the rank of Associate Professor, service is subsidiary to teaching and scholarship. It is recognized that new faculty members are unable to spend significant amounts of time in such endeavors, and they should not be expected to provide significant leadership with regard to school or University committees, government agencies, or professional organizations. For promotion to the rank of Professor, the service area receives much greater emphasis. It is expected that senior faculty provide significant contributions and leadership in the areas of governance, evaluation of existing academic programs, design of new programs/curricula, mentorship of students/junior faculty, committee work, and professional/community activities.

Institutional Programs and Services. All faculty members must share the work necessary to maintain the operation of the institution. Furthermore, faculty are expected to contribute to the growth of the institution through efforts that are aimed at improving programs and services. Examples of activities that relate to institutional programs and services are:

- 1) membership on committees or other assignments within the school or university;
- 2) leadership role in curriculum reform, development, and implementation;
- 3) contribution to faculty governance;
- 4) participation in institutional, departmental, or program strategic planning;
- 5) participation in student recruitment activities;
- 6) development of or participation in minority student programs;
- 7) participation in faculty recruitment;
- 8) conducting

faculty development programs; 9) providing in-service seminars, continuing education, and training; 10) participation in quality control; 11) participation in assessment programs; and 12) assembling educational displays in and outside of the school.

**Professional Activities.** Faculty should contribute to the maintenance and growth of their profession. The state, profession, and general public depend on the School of Dentistry for help in maintaining state-of-the-art practice in this area of health care delivery. Continuing education is both an instructional and public service activity that the school is uniquely positioned to provide. Finally, faculty are encouraged to serve the community at large in a professional capacity that enhances the stature of the School of Dentistry. Examples of such professional activities are: 1) membership in, and contribution to, professional organizations including leadership positions; 2) consultant to professional journals as a manuscript reviewer; 3) consultant to accrediting and other educational review boards; 4) membership on boards and committees in the community-at-large in a professional capacity; 5) presentation of continuing education programs; and 6) invited presentations for academic, professional, and community groups.

**Patient Care.** Faculty members at MUSoD, who have clinic privileges, are expected to provide exemplary patient care that is respected by patients and peers both within the School of Dentistry and the professional community. Examples of activities relating to patient care include: 1) certification by specialty boards; 2) awards or certification that recognizes clinical expertise; 3) referral of patients from within and outside the School of Dentistry; 4) expression of confidence and respect from patients and clinical staff; 5) consultation as requested by other faculty members and community dentists; 6) application of current methods/technologies in patient care; 7) membership on specialty examining boards; 8) service as a consultant on patient care for third party groups, courts, and/or health care organizations; and 9) development and participation in health care service to community programs.

## **VI. Procedures**

Promotion and tenure is accomplished through a multi-level review process involving: 1) MUSoD departments, P&TC, and the Dean; 2) University Committee on Faculty Promotions and Tenure; 3) the University Provost; and 4) the University President. Each of these stages is advisory except the last since it is the President who confers promotion and/or tenure (Faculty Handbook 302).

Typically, the chair of the MUSoD department initiates the request for appointment, promotion and/or tenure. The request for promotion and/or tenure can also occur by the potential candidate to either the department chair or the School's P&TC. Responsibility for preparation of the dossier belongs to the department chair but may be delegated to a senior tenured faculty member, preferably one who has attained the rank of professor. The candidate does not prepare the dossier but may have access to the factual material (confidential letters and evaluations must remain confidential) to insure it is complete and accurate. The candidate may also add material in an appendix section at the conclusion of the dossier. Current instructions, calendar dates, and format for presentation of materials are posted on the Provost's website (<http://www.marquette.edu/provost/promotion-tenure.shtml>). Completed dossiers are typically reviewed by the MUSOD P&TC in August so that the Dean can complete his review by mid-September. Following decisions by the School's P&TC and the Dean, the dossier is reviewed by the University Committee on Faculty Promotions and Tenure in early December. Results are announced in

early Spring of the following year.

Letters of support from MUSoD faculty should be solicited from appropriate departments and should address teaching, research, and service. Letters from students commenting on the teaching performance of the candidate should be randomly selected and include a representative sampling of current as well as former students.

Letters from extramural research evaluators are solicited by the P & T Committee Chair from a list containing six names provided by the Candidate along with the names of six additional external experts provided by the P & T Committee in consultation with the preparer of the dossier. The evaluators should consist of two to three names submitted by the candidate and two to three identified by the P & T Committee Chair. Outside evaluators should be distinguished academicians who hold rank equal to or above the rank for which the candidate is being evaluated. Evaluators must have no conflict of interest. They should be capable of evaluating scholarly activity and/or teaching excellence in the candidate's field as well as being able to assess the candidate's professional service. Letters should not be solicited from former mentors or others having a personal (non-professional) relationship to the candidate. For candidates being reviewed for the rank of Professor, evaluators must also address the candidate's level of recognition and whether such recognition is local, national and/or international.

## **VII. Performance Reviews**

### **Annual Performance Review**

Every full-time faculty member will be evaluated annually by his/her department chair to assess performance in the academic areas of endeavor (teaching, scholarship, and service) and, if applicable, progress towards promotion (department chairs will be evaluated by the Dean or his/her designee). The faculty member will complete a self-assessment evaluation prior to the performance review meeting, which will form a basis for the discussion. The performance review will ensure that: 1) a dialogue exists between individuals and their supervisors; 2) achievements are reviewed in the context of previously set goals, areas of improvement must be identified, and new goals set; 3) a recommendation and action plan for future growth and development is implemented; and 4) there is formal recognition, reward, and acknowledgement of contributions to MUSoD and the University. The faculty member must acknowledge by signature that s/he has read the document. A copy of the fully executed evaluation will be given to the faculty member. The fully executed original will be placed in the confidential permanent file kept in the office of the department chair (department chairs and administrator files are housed in the Office of the Dean).

There is a mandatory, formal review of each regular faculty member's progress towards promotion and tenure after three years on the tenure track. This review will be initiated and conducted by the MUSoD P&TC in conjunction with the candidate. A letter/report will be produced after the committee's deliberations and approved by the Dean that outlines the faculty member's progress towards promotion and tenure. Possible outcomes are listed in the Table below.

<i>Possible Outcomes of Promotion and Tenure 3-Year Review</i>	
<b>Outcome</b>	<b>Description</b>
Considered for P&T before time-bound year	The non-tenured faculty member has performed extraordinarily well (“excellent” or “exceptional”) in teaching AND scholarship. Service is at least “good”.
More time will be needed	Either teaching OR scholarship is developing well (“good”, “excellent”); the other academic area is satisfactory (“good”, “acceptable”). Service is at least “acceptable”.
Progress is not at expected level	Significant problems (“unacceptable”) are evident in teaching and/or scholarship (specify one or both). Progress will be monitored in annual reviews, with potential for non-renewal of contract after the fourth or subsequent years.
Serious problems exist	The problems in teaching and/or scholarship are so serious (“unacceptable”) that the faculty member’s fourth year will be his/her last year of employment.

The department chair will discuss the letter/report with the candidate and place a copy in the faculty member’s permanent file. The faculty member will have access to his/her permanent file regarding professional performance, and is responsible for its accuracy. All proceedings and documentation will remain confidential. For all tenured faculty members the annual reviews represent the School of Dentistry’s Post-tenure review as required by the University.

Revised and approved by the MUSoD P&TC (4/17/12)

Approved by University Committee on Promotion and Tenure (4/11/12).

Approved by the Dean, MUSoD (4/24/12)

**MINN** No response submitted

## **UMKC Guidelines for Awarding Promotion and Tenure**

### **Guidelines for Awarding the Academic Rank of Assistant Professor**

Evaluation of a candidate involves qualitative and quantitative judgments. The guidelines below are to be considered minimal for awarding the academic rank of Assistant Professor and are necessarily broad to allow for the varying backgrounds of potential faculty members.

#### **Candidates with Teaching Emphasis**

1. The candidate is expected to have a terminal degree in his/her field.
2. The candidate is expected to have a minimum of two years of appropriate graduate education or experience appropriate to the goals of the department/division.
3. The candidate is expected to demonstrate potential for research and scholarly activity.
4. The candidate is expected to demonstrate potential for quality teaching.
5. The candidate will have demonstrated service to the profession and community by documenting participation in at least THREE of the following:

- a. Active participation in local, state, and/or national professional organizations.
- b. Participation in professional continuing education courses.
- c. Participation in the practice of dentistry or dental hygiene.
- d. Contribution to or initiation of community education or service programs.
- e. Service as a consultant.
- f. Efforts aimed at self-improvement, such as:
  - i. Development/research leaves.
  - ii. Progress toward a Fellowship in the Academy of General Dentistry.
  - iii. Progress toward board certification.
  - iv. Enrollment in courses aimed at improving teaching or research skills.
  - v. Course work toward an advanced degree.

#### **Candidates with Research Emphasis**

1. The candidate is expected to have completed appropriate post-graduate education.
2. The candidate should be involved in an active, on-going research program.
3. The candidate is expected to have at least TWO publications in refereed journals or have made at least two presentations at national professional meetings.
4. The candidate is expected to demonstrate the potential for a high level of teaching competence.
5. The candidate will have demonstrated service to the school, university, profession, and community by documenting participation in at least THREE of the following:
  - a. Active participation in local, state, and/or national professional organizations.
  - b. Participation in professional continuing education courses.
  - c. Participation in the practice of dentistry or dental hygiene.
  - d. Contribution to or initiation of community education or service programs.
  - e. Service as a consultant.
  - f. Efforts aimed at self-improvement, such as:
    - i. Development/research leaves.
    - ii. Progress toward a Fellowship in the Academy of General Dentistry.
    - iii. Progress toward board certification.
    - iv. Enrollment in courses aimed at improving teaching or research skills.
  - g. Completion of a post-doctoral education experience.

#### **Guidelines for Awarding the Academic Rank of Associate Professor**

Satisfying the following minimal guidelines is essential for awarding the academic rank of Associate Professor. Meeting these criteria does not guarantee promotion. Evaluation of a candidate involves qualitative and quantitative judgments.

#### **Candidates with Teaching Emphasis**

1. The candidate will have demonstrated a high level of teaching competence.  
Evidence of teaching competence should include:
  - a. Design or major revision of educational materials for use at the School of Dentistry such as teaching manuals, videotapes, slide series, computer-assisted instruction, teaching case presentations, and other special instructional aids.  
Written assessments from external evaluators and the department chair are required.
  - b. Responsibility for a major division of the curriculum or major segments of a course. Course or unit objectives, outlines, and sample examinations should be provided as evidence, along with assessments from external evaluators and the department chair.
  - c. If appropriate documented evidence of skills in clinical instruction and supervision of patient services as assessed by peers, students, and department chair.
2. The candidate will be actively engaged in an on-going research/scholarly effort.  
Evaluation will include a description of the proposed, current, and completed research projects and the candidate's role in each.
3. The candidate's four best publications, as selected by the candidate, will be used to

assess the quality of the candidate's research activity. All of these must be in refereed journals and the candidate should be primary or senior author on at least two of these papers. The candidate may include textbooks or chapters in textbooks as a substitute for one of the publications.

4. The candidate will have demonstrated service to the school, university, community, and profession by documenting participation in at least THREE of the following:
  - a. Active participation in school and university committees.
  - b. Active participation in private practice or in the Dental Faculty Practice.
  - c. Provision of professional continuing education courses.
  - d. Contribution to or initiation of community educational or service programs, such as health fairs, screenings, etc.
  - e. Active participation in relevant professional associations at the local, state, or national level.
  - f. Service to journal editorial boards and peer review groups.
  - g. Service as a consultant.
5. The candidate shall fulfill at least TWO of the following:
  - a. Specialty board certification and/or post-doctoral graduate education with a certificate or degree.
  - b. Submission of a research grant to a government agency or other funding organization that utilizes peer review.
  - c. Preparation of industrial protocols and/or receipt of industrial contracts for clinical research or evaluation.
  - d. Efforts aimed at self-improvement which may include:
    - i. Fellowship in the Academy of General Dentistry.
    - ii. Development/research leaves.
    - iii. Course work aimed at improving teaching or research skills.
6. The candidate shall demonstrate progress toward establishing a national reputation in his/her field which may include: participation in workshops, symposia, presentations, and continuing education; membership in the American/International College of Dentists, American Dental Education Association, and International Association for Dental Research.

#### **Candidates with Research Emphasis**

1. The candidate's six best publications, as selected by the candidate, will be used to assess the quality of the candidate's research activity. All of these must be in refereed journals and the candidate should be primary or senior author on at least four of these papers. The candidate may include textbooks or chapters in textbooks as a substitute for one of the publications.
2. The candidate shall have made a contribution to scholarship, research, or creative activity by providing evidence of ONE of the following:
  - a. Textbook or chapters in textbooks.
  - b. Presentation(s) at national professional meetings.
3. The candidate will be actively engaged in an on-going research effort. Evaluation will include a description of the proposed, current, and completed research projects along with the candidate's role in each.
4. The candidate will have submitted and received support for at least one grant application to a federal agency, university-wide competition (excluding Rinehart), commercial and/or industrial company (which award must exceed \$20,000), or other funding agency that utilizes external peer review.
5. The candidate will have demonstrated a high level of teaching competence as documented by peer, student, and department chair assessments.
6. The candidate will have demonstrated service to the school, university, community, and profession by documenting participation in at least TWO of the following:
  - a. Active participation in school and university committees.

- b. Active participation in private practice or in the Dental Faculty Practice.
  - c. Provision of professional continuing education courses.
  - d. Active participation in relevant professional associations at the local, state, or national level.
  - e. Service to journal editorial boards and peer review groups.
  - f. Service as a consultant.
  - g. Contribution to or initiation of community educational or service programs.
  - h. Service on the graduate faculty.
  - i. Effective leadership as a mentor.
7. The candidate will demonstrate progress toward establishing a national reputation in his/her field through participation in workshops, symposia, presentations, continuing education, and various professional honors.

#### **Guidelines for Awarding the Academic Rank of Professor**

Satisfying the following minimal criteria is essential for promotion to the academic rank of Professor. Meeting these criteria does not guarantee the award of full Professorial rank. Evaluation of a candidate involves qualitative and quantitative judgments.

#### **Candidates with Teaching Emphasis**

1. The candidate will have demonstrated a high level of teaching competence. Evidence of teaching competence should include:
  - a. Major innovation in a teaching program and the development of educational materials for use at the School of Dentistry such as teaching manuals, videotapes, slide series, computer-assisted instruction, teaching case presentations, and other special instructional aids. Documentation that teaching materials are used in other schools of dentistry is highly desirable. Written assessments from external evaluators and the department chair are required.
  - b. Responsibility for a major division of the curriculum through course directorship or similar administrative responsibilities. Course or unit objectives, outlines, and sample examinations should be provided as evidence, along with assessments from external evaluators and the department chair.
  - c. If appropriate documented evidence of skills in clinical instruction and supervision of patient services as assessed by peers, students, and department chair.
2. The candidate must demonstrate continuous participation in an on-going research effort. Evaluation will include a description of proposed, current, and completed research projects and the candidate's role in each.
3. The candidate is expected to have at least EIGHT publications. All of these should be in refereed journals and the candidate must be primary or senior author on at least four of these papers. The candidate may include papers selected for presentation at national scientific meetings, textbooks or chapters in textbooks which may substitute for two of the publications, though it is rare that these can stand alone as examples of scholarship.
4. The candidate will have demonstrated service to the school, university, community, and profession by documenting participation in at least THREE of the following:
  - a. Active participation in school and university committees, including service as chair.
  - b. Active participation in private practice or in the Dental Faculty Practice.
  - c. Provision of professional continuing education courses.
  - d. Contribution to or initiation of community educational or service programs, such as health fairs, screenings, etc.
  - e. Elected positions in relevant professional associations at the local, state, or national level.
  - f. Service to journal editorial boards and peer review groups.



- g. Service as a consultant.
- 5. The candidate shall fulfill at least TWO of the following:
  - a. The candidate is expected to be Board certified if certification is available in the discipline. Fellowship in the Academy of General Dentistry may be substituted where board certification is not possible.
  - b. Submission to and award of a research grant by a government agency or other funding organization that utilizes peer review. Grants awarded by the Rinehart Foundation do not fulfill this requirement.
  - c. Preparation of industrial protocols and receipt of industrial contracts for clinical research or evaluation.
  - d. Efforts aimed at self-improvement which may include:
    - 1. Development/research leaves.
    - 2. Course work aimed at improving teaching or research skills.
  - e. Involvement in teaching and research at the graduate level, such as direction of thesis research, postgraduate research or graduate course work.
- 6. The candidate must demonstrate a national reputation in his/her field.

#### **Candidates with Research Emphasis**

- 1. The candidate is expected to have at least SIXTEEN publications in peer review journals. The candidate should be primary or senior author on at least eight of the papers. Publication of a textbook or chapters in textbooks may substitute for two first author publications.
- 2. The candidate will provide evidence of a continuous research effort. Evaluation will include a description of the proposed, current, and completed research projects along with the candidate's role in each.
- 3. The candidate will have submitted and received funding of at least two grant applications to a federal agency or other funding agency that utilizes peer review.
- 4. The candidate will have demonstrated a high level of teaching competence as documented by peer, student, and department chair assessments.
- 5. The candidate will have demonstrated service to the school, university, community, and profession by documenting participation in at least THREE of the following:
  - a. Active participation in school and university committees, including service as chair.
  - b. Active participation in the Dental Faculty Practice or its equivalent.
  - c. Provision of professional continuing education courses.
  - d. Elected positions in relevant professional associations at the local, state, or national level.
  - e. Service to journal editorial boards and peer review groups.
  - f. Service as a consultant.
  - g. Contribution to or initiation of community education or service programs.
  - h. Effective leadership as a mentor for junior faculty.
- 6. The candidate will be a member of the graduate and/or doctoral faculty and involved in teaching and research at the graduate level, such as direction of thesis research, postgraduate research, and graduate course work with demonstrated quality in performance of students.
- 7. The candidate must demonstrate a national reputation in his/her field.

#### **Guidelines for the Award of Tenure to Faculty with Initial Appointments at Senior Faculty Rank**

The best interests of a program may occasionally be served by appointing new faculty at the rank of Associate or Full Professor based upon their work at another institution and the preceding guidelines. An individual must meet or exceed the criteria for tenure to warrant a senior faculty appointment, but rarely will an initial appointment carry tenure. Therefore, extreme care must be exercised at the time of appointment.

The initial appointment of such faculty shall specify the year in which the award of tenure will be considered, in accordance with the timetables listed earlier in this document.

The initial appointment must also specify performance expectations for such faculty. These performance expectations shall be based upon the specific needs of the School as delineated in the position description, and shall be understood and agreed upon by the individual. Although the specific expectations of performance will be dictated by the particulars of the position, the candidate must demonstrate the ability to excel in the environment of the UMKC School of Dentistry before tenure is awarded. In all cases, the award of tenure will be predicated upon the expectation of sustained professional development and contribution to the programs of the School.

## UNMC

### Promotion Guidelines for University of Nebraska

Criteria: Both the general and specific criteria are to be applied in evaluating teaching, research and scholarly activity, and service. General criteria in the following table must be met before specific criteria are applied. *Competency in teaching is expected of all faculty ranks.* Although there are no exact time requirements, *it is unusual for promotion to occur less than 4 or 5 years after achieving a given rank.* Note that the criteria are cumulative, e.g., a candidate for associate professor must meet the criteria for assistant professor plus those listed for associate professor.

Examples of activities for Levels 1, 2, and 3 in the Teaching, Research/Scholarly Activity, and Service are described in paragraphs B, C, D of this section.

Level 1 = competence (**promise**)

Level 2 = significant achievement (**sustained accomplishment**)

Level 3 = highest level of excellence (**sustained outstanding accomplishment**)

	General Criteria	Specific Criteria (minimum)
Assistant Professor	Demonstrates initial research or clinical competence; board eligible or board-certified in primary specialty, if applicable; documented at or above average teacher.	Level 1 in any of the three areas: teaching, research/scholarly activity, and service.
Associate Professor	Board-certified in subspecialty (if appropriate); independence; leadership; creativity; emerging regional or national reputation.	Level 2 in two areas (teaching, research/scholarly activity, and service) plus Level 1 in one different area.
Professor	Clear evidence of leadership; makes lasting research or clinical contributions appropriate to the mission of the College; enhances prestige of College established national reputation.	Level 3 in two areas (teaching, research/scholarly activity, and service) plus Level 2 in one different area.

## SASK SIU

No response submitted

The following information is taken from the Faculty Handbook available on the SIU website.

Assistant Professor: Faculty are normally appointed to, rather than promoted to, the rank of assistant professor. Appointment to this rank normally requires the individual to have attained the terminal degree in the appropriate discipline and to show promise as a teacher and scholar. Persons appointed to the faculty who are nearing completion of a terminal degree are usually given the rank of lecturer or instructor with a contingency clause in the appointment indicating the rank will be changed to assistant professor upon completion of the terminal degree. Such a change in rank does not constitute promotion under this policy.

Associate Professor: as an assistant professor, a faculty member is expected to advance in competency as a teacher, to engage in scholarly/creative activities which enhance competency as a teacher and which contribute to the publicly available knowledge in the candidate's academic field, and to exercise increasing participation and responsibility in collegial governance of the unit, school, and/or university and/or public service related to professional expertise or training. After five years have been completed in the rank of Assistant Professor; a faculty member is expected to have developed the full range of capabilities of an Associate Professor. At this time, (in the fall of the sixth year as an Assistant Professor) the faculty member must submit an application for promotion to the rank of Associate professor, except as provided in Policy WC#S-91/92, Section VII, Paragraph c. An Assistant Professor with an outstanding record may apply earlier following consultation with the Chair and Dean (WC#1-09/10, Promotion Policy and Guidelines, approved December 8, 2010 by Chancellor Vandegrift)

Professor: as an associate professor, a faculty member is expected to continue to grow in stature as a teacher and to assume greater responsibility in curricular matters. Before advancing to the rank of professor, the faculty member must have developed a scholarly record appropriate for his or her academic field which has received recognition in the broader academic community. In those disciplines in which it is appropriate, a faculty member could also be judged on their creative record in the broader professional community. As an associate professor, a faculty member is expected to have demonstrated substantial participation in collegial governance of the unit, school, and/or University, and/or public service related to professional expertise or training. After a minimum of five years has been completed in the rank of Associate Professor, the faculty member is expected to have developed the full range of capabilities expected of a Professor. At this time (in the fall of the sixth year as an Associate Professor) or any time thereafter, the faculty member may submit an application for promotion to the rank of Professor. Although rare, an Associate Professor with an outstanding record may apply earlier following consultation with the Chair and Dean. (WC#1-09/10, Promotion Policy and Guidelines, approved December 8, 2010 by Chancellor Vandegrift)

C. If your institution has clinical tracks, what are the expected standard levels for each level?

**COLO** See previous response  
**CREG** See previous response

**IOWA** Clinical track faculty holds service positions through: service, teaching, and/or outreach missions of the University. All clinical faculty provide professional services to individual patients. Clinical track faculty are appointed at the ranks of instructor, assistant professor, associate professor, or professor and they are not eligible for tenure. They participate in the faculty governance process and the Faculty Senate.

Clinical Instructor: Performed clinical service and contribute to teaching.

Clinical Assistant Professor: Performed clinical service and teaching. The schedule is reviewed annually for first 6 years and thereafter at reappointment.

Clinical Associate Professor: Performed clinical services and teaching.

Productivity with visibility and impact in clinical services and teaching.

Recognition by peers as provided by documentation from internal and external reviews. The schedule is reviewed annually for the first 3 years and thereafter at reappointment.

**UMAN** No response submitted

**MARQ** See previous response

**MINN** No response submitted

**UMKC Guidelines and Procedures for Temporary Ranked Appointments and Promotion of Non Tenure Track Faculty** (*adopted 9/20/05; revised 11/09*)

**I. Guidelines for Promotion of Non Tenure Track Faculty with Clinical Teaching Emphasis**

Ranked Clinical Appointments. Clinical appointments are given to faculty members, either full-time or part-time, whose duties are substantially different from those of regular faculty members. These appointments have specified inception and termination dates, usually one academic year but in no case more than three years. An individual may be reappointed any number of times, but no number of appointments shall create any presumption of right to tenure. At a minimum, clinical faculty will have a terminal degree from a recognized United States or foreign academic program appropriate to their area(s) of designated responsibilities.

**II. Temporary Ranked Appointments**

- A. The candidate will possess credentials of the same nature and extent as those required of regular faculty at the same rank.
- B. The appointment will carry a title indicating a temporary appointment at the relevant rank, *e.g.* Visiting Professor.
- C. Unless the position is funded extramurally, the maximum term will be seven consecutive years.

**III. Guidelines for Initial Appointments above Clinical Assistant Professor**

At initial appointment faculty may be recommended at any level above Clinical Assistant Professor if they already meet the minimal guidelines for those lower ranks. Thus, an individual with experience, credentials and accomplishments may be ranked at a Clinical Associate Professor or a Clinical Professor if their background is consistent with promotion guidelines to either of those ranks.

#### **IV. Initial Appointment at Clinical Instructor Rank**

Normally, new clinical faculty will be ranked at Clinical Assistant Professor. However, under certain circumstances the rank of Clinical Instructor may be recommended. For example an individual who has just graduated with a dental degree but who has no experience in either private practice or in dental education and who has not engaged in programs designed to improve teaching skills may be recommended to begin at the clinical instructor rank.

#### **V. Guidelines for Non Tenure Track Promotion**

Specific Time Requirements by Academic Rank for Promotion.

- (1) If originally hired at Clinic Instructor, promotion to Clinical Assistant Professor can be initiated after 2 years at that level.
- (2) A faculty member shall spend a minimum of six years as Clinical Assistant Professor before consideration for promotion to Clinical Associate Professor. Thus, an individual in this rank will be eligible for promotional consideration during the sixth year of appointment at this rank. The promotion packet will be submitted by the end of the fifth academic year.
- (3) A faculty member shall spend a minimum of four years as Clinical Associate Professor before consideration for promotion to Clinical Professor. Thus, an individual in this rank will be eligible for promotional consideration during the fourth year of appointment at this rank. The promotion packet will be submitted by the end of the third academic year.
- (4) Earlier promotions may be recommended where there is evidence of outstanding performance.

#### **Promotion from Clinical Instructor to Clinical Assistant Professor**

Satisfying the following minimal guidelines is essential for promotion to the academic rank of Clinical Assistant Professor. Meeting these guidelines does not guarantee promotion. Non-regular faculty members can maintain their status as a Clinical Assistant Professor indefinitely. Evaluation of a candidate involves qualitative and quantitative judgments.

##### **Basic Requirements:**

1. Candidate must have a terminal degree from a recognized academic program appropriate to area of designated responsibilities.
2. Appropriate formal and/or informal learning and practical experience aimed at improving skills related to the science of teaching and to dentistry and/or dental hygiene.
3. Completion of a total of at least 25 hours of continuing or advanced education for each year preceding the application to Clinical Assistant Professor. These must be related to dental patient care, the science of teaching, or other continuing education appropriate to the candidate's responsibilities.

##### **Teaching Guidelines**

The candidate will have demonstrated an above average level of teaching competence. Evidence of teaching competence should reflect a commitment to student learning, and participation in programs that serve to improve teaching expertise.

Evidence of teaching competence should be related to clinic, classroom and/or pre-clinic laboratory, student mentoring, and supervision of patient services as assessed by peers, students and department chairperson. Documentation must include, but is not limited to the following:

1. Report from Associate Dean for Clinics noting any quality assurance inadequacies.

2. Report from department chairperson noting participation in and contributions to department goals and activities such as participation in calibration exercises and other faculty development programs offered by the institution and the candidate's department.
3. Reports from quality assurance, student evaluations, department chair, clinic dean and peers that candidate represents to students only those treatment principles which are consistent with departmental and institutional standards.
4. Candidate must satisfy at least one of the following:
  - a. Received or working toward fellowship in the Academy of General Dentistry or comparable organization.
  - b. American Dental Association-approved specialty board eligibility or certification and/or post-doctoral graduate education with a certificate or degree.
  - c. Received or working toward some other recognized formal certification that supports the faculty member's teaching, research and/or service responsibilities.
  - d. Specifies and has implemented a plan of development activities that enhances the individual's effectiveness in carrying out assigned responsibilities. This may include established courses, seminars, workshops offered through a variety of sources.

### **Service Guidelines**

The candidate will have demonstrated service to the school, university, community and profession by documenting participation in at least two of the following:

1. Active and effective participation in school committees. Documentation should be provided by committee chairperson describing candidate's level of participation in committee deliberations and on committee work beyond scheduled meetings.
2. Active participation in clinical practice.
3. Contribution to community educational or service programs, such as health fairs, screenings, etc. Candidate should itemize dates and content of programs.
4. Active membership and participation in relevant professional associations at the local, state or national level. Candidate must document activities of association for which there was a significant responsibility.
5. Service as a consultant where candidate can apply his/her professional expertise in other settings. This may include such activities as providing advice to communities about the promotion of oral health.

### **Promotion from Clinical Assistant Professor to Clinical Associate Professor**

Satisfying the following minimal guidelines is essential for promotion to the academic rank of Clinical Associate Professor. Meeting these guidelines does not guarantee promotion. A non-regular faculty member can maintain their status as a Clinical Associate Professor indefinitely. Evaluation of a candidate involves qualitative and quantitative judgments.

#### **Basic Requirements:**

1. Candidate must have a terminal degree from a recognized academic program appropriate to area of designated responsibilities.
2. Candidate must also fulfill one of the following:
  - a. Fellowship in the Academy of General Dentistry or other appropriate

- organization applicable to one's responsibilities in teaching, research and/or service.
  - b. American Dental Association-approved specialty board eligibility or certification.
  - c. Completion of accredited graduate education program with awarding of a certificate or degree.
  - d. Received recognized formal certification that supports the faculty's member's teaching, research, and/or service responsibilities.
  - e. Completion of a plan of developmental activities that enhances the individual's effectiveness in carrying out assigned responsibilities. This may include established courses, seminars, or workshops offered through a variety of sources.
3. Appropriate formal and/or informal learning and practical experience aimed at improving skills related to the science of teaching and to dentistry and/or dental hygiene.
  4. Completion of a total of at least 25 hours of continuing or advanced education for each year preceding the application to Clinical Associate Professor. These must be related to dental patient care, the science of teaching, or other continuing education appropriate to the candidate's responsibilities.

### **Teaching Guidelines**

1. The candidate will have demonstrated a high level of teaching competence. Evidence of teaching competence must include all of the following:
  - a. Effectiveness in the supervision of patient services (e.g. report from the clinic dean).
  - b. Effective clinical instruction (e.g. student, peer, team coordinator, department chair assessments).
  - c. Effective student mentoring (e.g. advising students on grand rounds case development, table clinics, research, supervision of treatment planning, etc.).
  - d. Report from Associate Dean for Clinics documenting number (if any) and severity of quality assurance events.
  - e. Report from department chairperson noting participation in and contributions to department goals and activities such as calibration exercises and other faculty development programs offered by the institution or candidate's department.
  - f. Reports from quality assurance, student evaluations, department chair, clinic dean and peers that candidate represents to students only those treatment principles which are consistent with departmental and institutional standards.
  - g. Report from department chairperson documenting leadership or active participation in clinical, team, classroom, and/or preclinical laboratory instructional innovation.
  - h. Specifies and has implemented a plan of development activities that enhances the individual's effectiveness in carrying out assigned responsibilities. This may include established courses, seminars, workshops offered through a variety of sources.
2. The candidate may provide additional evidence of contribution to the curriculum to document teaching competence and contribution including any or all of the following:
  - a. Design or major revision of educational materials for use at the School of

Dentistry such as teaching manuals, audiovisual materials, computer-assisted instruction, teaching case presentations, and other special instructional aides.

- b. Responsibility for a major segment(s) of a course. Course or unit objectives, outlines, and sample examinations should be provided as evidence, along with assessments from external evaluators and the department chairperson.
  - c. An annotated bibliography of journal articles related to one's discipline and which is of practical importance during the clinical supervision of students.
3. Teaching Portfolio: All candidates will provide a brief personal statement describing one's philosophy of teaching (e.g. instructional interactions and strategies) and how that is translated into practice in the classroom, laboratory and clinic depending on one's responsibilities. Guidelines and resources pertaining to the teaching portfolio are available separately and the candidate is urged to contact the chairperson of the SP&TC for guidance.

### **Service Guidelines**

The candidate will have demonstrated service to the school, university, community and profession by active and effective participation in school committees.

Documentation should be provided by committee chairperson describing candidate's level of participation in committee deliberations and on committee work beyond scheduled meetings. Candidates should also document participation in at least **two** of the following:

1. Active participation in private practice or in the Dental Faculty Practice.
2. Contribution to community educational or service programs, such as health fairs, screenings, etc. Candidate should itemize dates and content of programs.
3. Active membership and participation in relevant professional associations at the regional, state or national level. Candidate must document activities of association for which there was a significant responsibility.
4. Service as a consultant where candidate can apply his/her professional expertise similar to the expertise practiced in the School of Dentistry. This may include such activities as providing advice to communities about the promotion of oral health, or consultation in legal cases.
5. Presentations to School of Dentistry faculty or to faculty in another unit (e.g. Lunch and Learn programs).

### **Scholarly Activity**

The candidate is required to fulfill **one** of the following:

1. Presentation to faculty of review of dental literature in one's discipline or in some other area related to dental education.
2. One or more publications as first or secondary author in refereed or non-refereed medical, dental, or educational journals. Publication must be related to one's School of Dentistry responsibilities. Examples of acceptable types of publications are provided below and are not exhaustive:
  - a. Case report.
  - b. Review of a topic related to one's responsibilities.
  - c. Review of a new clinical technique or modification of an existing technique.
  - d. An educational technique in the dental setting.
  - e. Poster presentation at an acceptable national or regional conference.



Acceptable regional conferences include but are not necessarily limited to: Greater New York Dental Meeting, Yankee Dental Conference; Dallas Midwinter; Chicago Midwinter; Hinman Meeting (Atlanta). Acceptable national conferences include but are not limited to: IADR, AADR, ADA, ADEA, and ADHA.

3. Participation in the design, development and execution of a research project or protocol.

### **Promotion from Clinical Associate Professor to Clinical Professor**

Satisfying the following minimal guidelines is essential for promotion to the academic rank of Clinical Professor. Meeting these guidelines does not guarantee promotion. Evaluation of a candidate involves qualitative and quantitative judgments. Promotion to Clinical Professor requires sustained efforts to enhance teaching, service and scholarship in the School of Dentistry beyond those for promotion to Clinical Associate Professor.

#### **Basic Requirements**

1. Candidate must have an advanced or terminal degree from a recognized academic program appropriate to area of designated responsibilities.
2. Candidate should fulfill one of the following:
  - a. Fellowship in the Academy of General Dentistry or other appropriate organization applicable to one's responsibilities in teaching, research and/or service.
  - b. American Dental Association approved specialty board eligibility or certification.
  - c. Completion of accredited graduate education program with awarding of a certificate or degree.
  - d. Received recognized formal certification that supports the faculty's member's teaching, research, and/or service responsibilities.
  - e. Completion of a plan of developmental activities that enhances the individual's effectiveness in carrying out assigned responsibilities. This may include established courses, seminars, or workshops offered through a variety of sources.
3. Appropriate formal and/or informal learning and practical experience aimed at improving skills related to the science of teaching and to dentistry and/or dental hygiene.
4. Completion of a total of at least 25 hours of continuing or advanced education for each year preceding the application to Clinical Professor. These must be related to dental patient care, the science of teaching, or other continuing education appropriate to the candidate's responsibilities.

#### **Teaching Guidelines**

1. The candidate will have demonstrated a high level of teaching competence. Evidence of teaching competence should include the following. (Faculty involved in clinical teaching must submit information for items a.-g.) Additional evidence not identified below is welcome:
  - a. Effectiveness in the supervision of patient services (e.g. report from clinic dean).
  - b. Effective clinical instruction (e.g. student, peer, team coordinator, department chair assessments).
  - c. Effective student mentoring (e.g. advising students on grand rounds case development, table clinics, research, supervision of treatment planning, etc.).

- d. Report from Associate Dean for Clinics documenting number (if any) and severity of quality assurance events.
  - e. Report from department chairperson noting participation in and contributions to department goals and activities such as calibration exercises and other faculty development programs offered by the institution or candidate's department.
  - f. Specifies and has implemented a plan of development activities that enhances the individual's effectiveness in carrying out assigned responsibilities. This may include established courses, seminars, workshops offered through a variety of sources.
  - g. Reports from quality assurance, student evaluations, department chair, clinic dean and peers that candidate represents to students only those treatment principles which are consistent with departmental and institutional standards.
  - h. Design or major revision of educational materials for use at the School of Dentistry such as teaching manuals, audiovisual materials, computer-assisted instruction, teaching case presentations, and other special instructional aides.
  - i. Responsibility for a major segment(s) of a course. Course or unit objectives, outlines, and sample examinations should be provided as evidence, along with an assessment from external evaluators and the department chairperson.
  - j. An annotated bibliography of journal articles related to one's discipline and which is of practical importance during the clinical supervision of students.
2. Teaching Portfolio: All candidates will provide a personal statement describing one's philosophy of teaching and how that is translated into practice in the classroom, laboratory and clinic depending on one's responsibilities. Guidelines and resources pertaining to the teaching portfolio are available separately.

### **Service Guidelines**

The candidate will have demonstrated service to the school, university, community and profession by active and effective participation in school committees. Documentation should be provided by committee chairperson describing candidate's level of participation in committee deliberations and on committee work beyond scheduled meetings.

The candidate should also document participation in at least **two** of the following:

1. Evidence of active participation in private practice or in a dental practice.
2. Contribution to community educational or service programs, such as health fairs, screenings, etc. Candidate should itemize dates and content of programs.
3. Active membership and participation in relevant professional associations at the regional, state or national level. Candidate must document activities of association for which there was a significant responsibility.
4. Service as a consultant where candidate can apply his/her professional expertise. This may include such activities as providing advice to communities about the promotion of oral health.

### **Scholarly Activities**

The candidate is required to fulfill **two** of the following:

1. One or more publications as first or secondary author in refereed or non-refereed medical, dental, or educational journals. Publication must be

related to one's School of Dentistry responsibilities. Examples of acceptable publications are provided below and are not intended to be exhaustive:

- a. Case report.
  - b. Critical review of a topic related to one's responsibilities.
  - c. Critical review of a new clinical technique or modification of an existing technique.
  - d. An educational technique in the dental setting.
  - e. Poster presentation at an acceptable national or regional conference. .  
Acceptable regional conferences include but are not necessarily limited to: Greater New York Dental Meeting, Yankee Dental Conference; Dallas Midwinter; Chicago Midwinter; Hinman Meeting (Atlanta).  
Acceptable national conferences include but are not necessarily limited to: IADR, AADR, ADA, ADEA, and ADHA.
2. Submission or participation in a research grant to a government agency or other funding organizations that utilize peer or non-refereed review.
  3. Preparation of or participation in an industrial protocol and/or receipt of an industrial contract for clinical research or evaluation.
  4. Participation in the design, development and execution of a research project or protocol.
  5. Presentations to School of Dentistry faculty, students, local dental or dental hygiene organizations that synthesize the current literature in an appropriate area of dental patient care.

## **Procedures for Promotion of Non Tenure Track Faculty**

### **Initiation of Recommendations**

A recommendation to consider a non tenure track faculty member for promotion in academic rank shall be initiated by the Department Chair or the faculty member. The Part 1 and Part 2 forms are used for evaluation of the candidate's portfolio. The Chair will complete a Part 2 form and forward his/her evaluation to the Dean. Forms are available from the Dean's office.

### **Promotion and Tenure Committee Review**

The Promotion and Tenure committee reviews the portfolio of the candidate. Only those committee members who are at a rank at or above the position sought by the candidate may vote on that candidate's promotion. The Promotion and Tenure Committee should solicit whatever additional information its members deem appropriate from within and outside the University, to evaluate the candidate under consideration in the areas of teaching, clinical competence and service, and scholarship as reflected by the candidate's established responsibilities.

### **Review by the Dean**

Upon receipt of the recommendations from the Department Chair and the Promotion and Tenure Committee, the Dean shall review all recommendations. The Dean should solicit whatever additional information is deemed appropriate for making an independent evaluation and recommendation.

### **Campus Review**

If no review of applications for promotion of non-regular faculty is required, the dean shall make the final decision. If the campus implements an additional level of peer review, the portfolios for promotion shall be forwarded in accordance with campus policies.

## Appeal Process

To ensure fair and timely review of all actions, the Promotion and Tenure Committee and the Chairs shall communicate their recommendations to candidates under consideration and give the candidates a reasonable time to submit written rebuttal to the recommendation so that both recommendation and rebuttal may be forwarded to the Dean's level of review. In the event of a negative decision by the committee, the individual and the supervisor shall be immediately notified in writing of the adverse outcome. The individual and the supervisor will be given a reasonable time (not to exceed 10 working days) both to submit a written rebuttal and to have an opportunity to appear before the committee in support of the faculty member's candidacy. The committee's subsequent decision will be forwarded to the Dean as its recommendation. Written rebuttal received from the member and/or the supervisor will be forwarded with the recommendation. The Dean's subsequent decision is final for School of Dentistry Review.

<b>UNMC</b>	We do not have clinical track positions.
<b>SASK</b>	No response submitted
<b>SIU</b>	Currently the administration and promotion and tenure committee are developing quantitative parameters for promotion in the clinical track.

## V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN

- A. What, if any, are the implications of the following article? Summarize and report the discussion.

*Dental Composite Restorations and Psychosocial Function in Children.* Maserejian Nancy N., Trachtenberg Felicia L., Hauser Russ, McKinlay Sonja, Shrader Peter, Tavares Mary, and Bellinger David C. Pediatrics originally published online July 16, 2012. DOI: 10.1542/peds.2011-3374.  
<http://pediatrics.aappublications.org/content/early/2012/07/11/peds.2011-3374.full.pdf+html>

<b>COLO</b>	No response submitted.
<b>CREG</b>	Composite resin restoratives that are manufactured from Bisphenol-A or some form of Bis-GMA which tends to degrade to Bisphenol-A has for some time now been suspected of affecting the general health of the population. The industry says it is safe for use, and some watchdog groups claim otherwise. This study may be one of many that can start to attach some scientific evidence to claims by either side.
<b>IOWA</b>	No response submitted
<b>UMAN</b>	No response submitted
<b>MARQ</b>	More research is needed. We anticipate more concern over Bis-GMA use in the future
<b>MINN</b>	No response submitted
<b>UMKC</b>	Another reason to not use resin composite in the posterior in children. Would need more articles besides this one
<b>UNMC</b>	We found it interesting, but our Pediatric section reports no concerns from parents
<b>SASK</b>	No response submitted

**SIU** The section heads of Operative and Pediatric Dentistry along with other faculty in the two sections were consulted. Based on the previously published statement by the American Dental Association, SIU has not changes its policies on the use of dental composites containing Bis-GMA. As the U.S. Department of Health and Human Services and the U.S> Food and Drug Administration review the new information, SIU will utilize the ADA's guidance for advice and recommendations on the use of composite restorations for adult and pediatric patients

B. In the last five years, has your College/School made policy changes that impact/restrict the utilization of amalgam? If yes, what are the changes and the rationale for such changes?

**COLO** In the last five years, we did NOT make policy changes that impact the utilization of amalgam.  
**CREG** No policy changes.  
**IOWA** No response submitted  
**UMAN** No response submitted  
**MARQ** No policy changes.  
**MINN** No response submitted  
**UMKC** No we have not stopped using amalgam. We see more catastrophic failure with posterior resins that come from private practice offices.  
**UNMC** No, there have been no policy changes or even any discussion regarding amalgam use.  
**SASK** No response submitted  
**SIU** No, we do not have any policies changes that have impacted or restricted the utilization of amalgam.

## **VI. REGIONAL CODE AGENDA**

*To be established by the respective Region and Regional Director. Please also report on responses to the Regional Agenda by all participants.*

**No Regional Agenda Submitted**

# **Consortium of Operative Dentistry Educators**

## **(CODE)**



### **REGION III (SOUTH MIDWEST) ANNUAL REPORTS**

Region III Director:  
Dr. Scott Phillips  
Mississippi School of Dentistry  
Jackson, MS

Region III Annual Meeting Host:  
Dr. Joseph Connor  
University of Texas Health Sciences Center  
San Antonio, TX

Region III Annual Report Editor:  
Dr. Joseph Connor

## CODE REGIONAL MEETING REPORT FORM

**REGION** III (South Midwest)

### LOCATION AND DATE OF MEETING:

University: University of Texas Health Science Center

Address: San Antonio, TX

Date: November 1 - 2, 2012

### CHAIRPERSON:

Name: Dr. Joseph Connor

Phone #: 210-567-3693

University: UTHSC

Fax #: 210-567-6354

Address: San Antonio, TX 78229

E-mail: connorj@uthscsa.edu

**List of Attendees:** Please complete the CODE Regional Attendees Form (following page)

### Suggested Agenda Items for Next Year:

Use of teaching aids in teaching operative dentistry

### LOCATION AND DATE OF NEXT REGIONAL MEETING:

Name: Dr. Gary Frey

Phone #: 713-486-4475

University: University of Texas-Houston

Fax #: \_\_\_\_\_

Address: Houston, TX

E-mail: Gary.n.frey@uth.tmc.edu

Date: TBA

Please return all completed enclosures to  
Dr. Larry D. Haisch, National Director, UNMC College of Dentistry;  
40<sup>th</sup> and Holdrege Streets; Lincoln, NE 68583-0740.

**Deadline for return: 30 Days post-meeting**

Office: 402 472-1290 Fax: 402 472-5290 E-mail: lhaisch@unmc.edu

Also send the information on a disk and via e-mail with all attachments.

Please indicate the software program and version utilized for your reports.

## CODE Region \_III\_ Attendees Form

NAME	UNIVERSITY	PHONE #	FAX #	E-MAIL ADDRESS
Terry Fruits	Oklahoma	405-271-5735		Terry.fruits@ouhsc.edu
Robert Miller	Oklahoma	405-271-5735		Robert.miller@ouhsc.edu
Joseph Connor	UTHSCSA	210-567-3693		connorj@uthscsa.edu
James Summit	UTHSCSA	210-567-3684		summit@uthscsa.edu
JD Overton	UTHSCSA	210-567-3705		overtonj@uthscsa.edu
Karen Troendle	UTHSCSA	210-567-3653		troendle@uthscsa.edu
Kevin Gurekis	UTHSCSA	210-567-3688		gureckis@uthscsa.edu
Rita Parma	UTHSCSA	210-567-3533		parma@uthscsa.edu
Christine Beninger	Baylor	214-8828-8211		cbeninger@bcd.tamhsc.edu
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Stanton Cobb	Baylor	214-828-8211		scobb@bcd.tamhsc.edu
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Shalizeh Patel	Houston	713-486-4269		Shalizeh.patel@uth.tmc.edu
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David Oncale	Louisiana	504-941-8257		doncal@lsuhsc.edu
Janet Harrison	Tennessee	904-448-6692		jharrison@uthsc.edu
James Simon	Tennessee	904-448-6692		jsimon@uthsc.edu
Scott Phillips	Mississippi	601-984-6039		smphillips@umc.edu
James Lott	Mississippi	601-984-6039		jrlott@sod.umsmed.edu



**2012 NATIONAL CODE AGENDA  
REGION III  
SUMMARY RESPONSES TO NATIONAL AGENDA**

**(Editor Note: Questions condensed for printing purposes)**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**NO REGIONAL SUMMARY RESPONSES SUBMITTED**

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

**I. MILLENNIAL IMPACT**

**II. DIGITAL DENTISTRY**

**III.RESTORATIVE DENTISTRY**

**IV.SCHOLASTIC**

**V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

**VI.REGIONAL CODE AGENDA**

## 2012 NATIONAL CODE AGENDA

(Evidence cited where applicable)

November 1 - 2, 2012

Report on the proceedings of CODE Region II

Haisch LD (ed.) Code Regional Annual Reports 2012

<http://www.unmc.edu/code/>

### Region III School Abbreviations

BAY	Baylor University	OKLA	University of Oklahoma
LSU	Louisiana State University	TENN	University of Tennessee
MISS	University of Mississippi	UTHSA	University of Texas- San Antonio
	UTH		University of Texas- Houston

## 2012 NATIONAL CODE AGENDA

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

### GENERATION Y/MILLENNIAL DENTAL STUDENTS

#### Background:

During a recent ADEA (American Dental Education Association) board meeting in Washington, D.C., 40 millennial dental students discussed their perceived strengths and weaknesses and other trends to shed light on how schools can provide better dental education. Millennials are those students born between 1979 and 1994. The dental students said they use technology constantly to access information, conduct business and stay in touch, and that the Internet, text messaging, digital music, and downloads were all vital to their lives. The students expressed a preference for the ease of use of technology, but wanted to ensure that personal interaction remained a key part of their learning experiences. Many students indicated that their best academic experiences were those that involved a great deal of hands-on learning and allowed them to study in a group setting. The students also felt strongly that the best professors were those who care whether students were learning class materials, rather than just memorizing them, and those who made themselves available for help when necessary.

#### Millennial Generation (Generation Y):

1. **Definition:** a term used to refer to the generation, born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.
2. **Common Traits:**
  - **Tech-Savvy:** Generation Y grew up with technology and rely on it to perform their jobs better. Armed with BlackBerrys, laptops, cellphones, and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through e-mail and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations.
  - **Family-Centric:** The fast-track has lost much of its appeal for Generation Y who is willing to trade high pay for fewer billable hours, flexible schedules and a better work/life balance. While older generation s may view this attitude as narcissistic or lacking commitment, discipline and drive, Generation Y have a different vision of workplace expectations and prioritize family over work.
  - **Achievement-Oriented:** Nurtured and pampered by parents who did not want to make the mistakes of the previous generation, Generation Y is confident, ambitious, and achievement-oriented. They have high expectations of their employers, seek out new

challenges and are not afraid to question authority. Generation Y wants meaningful work and a solid learning curve.

- **Team-oriented:** As children, Generation Y participated in team sports play groups, and other group activities. They value teamwork and seek the input and affirmation of others. Part of a no-person-left-behind generation, Generation Y is loyal, committed and wants to be included and involved.
- **Attention-Craving:** Generation Y craves attention in the forms of feedback and guidance. They appreciate being kept in the loop and seek frequent praise and reassurance. Generation Y may benefit greatly from mentors who can help guide and develop their young career.

## **I. MILLENNIAL IMPACT**

### **A. Classroom/Didactic Experiences**

1. Has the way your department teaches the didactic component of restorative dentistry theory or concepts changed significantly in the last 10-12 years? (e.g. traditional class lectures replaced with small group discussion session, or most of the didactic curriculum is delivered on-line).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**BAY** We continue to offer traditional lectures for the didactic component of restorative dentistry. Power Point lectures are accessible on Blackboard for the students to review as needed and at whatever time of day they prefer to study. Since the students like to network and work in groups from time to time, the EBD exercises and treatment planning sessions appeal to them and are a good learning experience.

**LSU** No

**MISS** Yes, use of Blackboard for information deliver is the general way to give information to students. Small groups have been incorporated in some courses to stimulate more discussion and critical thinking on topics. TurningPoint audience response software, "clickers" has been encouraged and is gaining in use for "in class" immediate feedback, and the ability to record, stream, and archive lectures is available in the classrooms. We are not aware of any decisions made based on the students learning style or generational tendencies, but as technology is developed and becomes more accessible and affordable, change has occurred. The students' familiarity and dependence on technology has pushed the implementation of some changes quicker. Social media and societies dependence on new technologies is likely the reason for implementation of some changes we have seen, and that may be driven by Gen Y. Most of the changes are only used by faculty when a benefit is seen by its user. Others, like the universal use of Blackboard, were encouraged when the university stopped printing schedule, syllabi, and removed all 35mm slide projectors. Elimination of radiographic film processors and chemicals, implementation of an electronic health record, etc., all have pushed changes in how we teach didactically.

- OKLA** No. The only things that have significantly changes in our department's teaching methodology is that: 1) we make our lecture slides available on-line; 2) we have increased the utilization of technique demonstrations videos, and 3) we have converted our major pre-clinical course to a Pass/Fail format. Some of the other disciplines' courses at our college are adding more activities on-line that eliminate some lecture materials, and require on-line self-directed learning.
- TENN** Yes. 1). More on-line courses (mostly review courses) with on-line exams; 2). on-line quizzes given in lecture courses; and 3) more orientation videos on-line, especially for technology training such as Axium training. Incorporation of DentSim units for initial prep experiences the day students enter school. Before students enter the school, they are sent directions to view training videos with didactic info incorporated on a website specifically for this purpose (previously, they were sent DVDs with the same info).
- UTHSA** No. Theory and concepts for the didactic component has not changed significantly in the last 10 - 12 years. It includes lectures with illustrations, photographs, and video demonstrations available for recall on student computers. It also includes small group sessions. What is presented in the traditional way is also available on-line.
- UTH** Yes, primary innovations: A) critical thinking group presentations; B) e-Portfolio presentations of individual student work, and C) use of Blackboard to post lectures, assignments, and other types of needed information. IN a direct sense, none of these innovations were implemented due to generational characteristics of students. However, they were implemented with influence from current pedagogical trends, which undoubtedly has some relation to generation traits of learners. The use of Blackboard was implemented because the previous course director did not use it.

## **B. Pre-Clinical Laboratory Experiences**

1. Has the way your department teaches the pre-clinical laboratory component of restorative dentistry theory or concept changed significantly in the last 10-12 years? (e.g. traditional work benches replaced with high tech manikin labs or significant use of patient simulators, like DentSim).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**BAY** Our D2 simulation lab replaced the traditional work benches in 2002. Axium use is introduced to our D2 students and used in the Introduction to Clinical Practice courses where students enter medical and dental history for a fictitious patient, and based on a set of findings, develop a treatment plan for this patient. The operative procedures for this patient are then completed during a spring rotation in the sim lab; the student presents the patient to the instructor including all pertinent medical and dental history, receives authorization to "anesthetize" the patient, place rubber dam, and prepare the tooth. After the preparation is evaluated, the student is permitted to restore the tooth (using a liner or base if indicated), remove the rubber dam, and check occlusion and proximal contact. The student completes a progress note in Axium and receives a qualitative assessment from the attending faculty member using the QA form in Axium. These changes were not due to generational characteristics but rather in an effort to better prepare the students for clinical treatment of their patients.

- LSU** We have both traditional work benches and 2 Sim Lab (70 stations) that I would classify as medium-tech manikin labs. Changes in philosophy of our faculty leaders and curriculum.
- MISS** Yes, a pre-clinical remodel was completed and patient simulators were installed. Clinical simulation and clinical protocols are used when learning. The HER is taught in a didactic course and used when applicable in the pre-clinical course to better prepare for clinics. Rubrics for evaluation are now used for all pre-clinical courses. The current students want exact criteria and instructions with constant positive feedback on progress. Rubrics were implemented in all courses to allow students to self-evaluate and provide defined written objectives. New simulation lab and curriculum changes have induced changes. New simulation lab allows all faculty and students in one open room. Students can go to multiple faculty and get feedback. Simulation lab has half the number of spaces as older pre-clinical rooms and curriculum changes were done to allow access to the room. Laboratory and didactic courses were separated into two different courses from one based on registrar's reporting needs. Less laboratory work is done by students in pre-clinical courses (waxing, casting, processing dentures) due to time required.
- OKLA** Yes. We replaced our original workbenches with Adec manikin simulation equipment in 2004. We do not have any DentSims. We completely restructured and re-sequenced the materials that we were teaching in our didactic and lab courses in 2007. None of the changes were made due to generational characteristics. The replacement of the lab benches in 2004 was mainly because our lab was old and worn out. Perhaps our administration also thought this would help us compete with other schools in recruiting students. The course curriculum was revised in 2007 because it seemed like a more logical and effective approach to teaching the material.
- TENN** Yes. 40 DentSim units were installed in 2001 in the pre-clinical laboratory. At the same time, 80 Kavo patient simulation manikins were also installed in the other half of the pre-clinical laboratory. The DentSim technology was just starting to be available for use and the existing pre-clinic laboratory would not have passed accreditation standards. Something had to be done and the State was able to supply the necessary money. With some of that additional money, a CEREC 3 unit was purchased. Sirona will be coming out in March 2013 with a preparation evaluation software that will allow objective evaluations of internal and external preparations for practical exams. This should be a big help for the faculty assigned to the laboratory because it will help them give the student consistent feedback.
- UTHSA** Yes. Laboratories were renovated to incorporate manikins (Adec, Kilgore). Changes are not due to generational characteristics, but simply to the availability of improved simulation capability. There was a realization that the technical tasks that students need to learn to accomplish should be based more on biological findings and clinical situations than on measurement specification, so when more sophisticated simulation capability was available or developed, it was incorporated.
- UTH** Yes, primary innovations: A) high tech manikin simulation lab; B) series of operative dentistry video demonstrations, and C) detailed criteria sheets for each procedure, requiring self-evaluation. The series of operative dentistry video demonstrations were the result from first year operative dentistry students. Consequently, we involved these students in the filming and production of the videos. A high tech manikin simulation lab and detailed criteria sheets for each procedure, requiring self-evaluation were implemented with influence from current pedagogical trends, which undoubtedly has some relation to general traits of learners. Plus a new building meant new and improved manikins.

### **C. Clinical Experiences**

1. Has the way your department conducts clinical teaching of restorative dentistry changed significantly in the last 10-12 years? (e.g. discipline clinics replaces by general dentistry clinics, traditional clinical requirements abandoned for “activity points”)
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990’s.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school’s leaders or curriculum).

**BAY** No. In our D3 year, our clinics are discipline based. D4 continues to have general dentistry faculty supervising restorative procedures with the exception of Removable Prosthodontics which is still discipline based. D3 has more traditional clinical requirements while D4 has a combination of traditional clinical requirements and “RV” (relative value) activity points.

**LSU** Sort of. The Operative Dentistry department became a division of the Department of Comprehensive Dentistry and Biomaterials approximately six years ago. The division head has the title of “Director of Operative Education.” The faculty that is responsible for the OP 1 (didactic and pre-clinical lab), OP 2 (didactic, pre-clinical sim lab, and clinic), OP 3 courses (didactic and clinic) are primarily full-time and part-time General Dentists without any advanced Operative degrees/certificates. However, there is very little change in clinical teaching philosophies since the Operative division recommends/discusses any change of materials used on the clinical floors, and, there is a yearly “calibration” of materials/techniques/grading for the full and part-time faculty covering clinical Operative Dentistry. There have been severe budget cuts over the past 4 years that have impacted faculty staffing which may cause a shift toward self-paced (podcast) instruction so adequate clinical staffing will be achieved.

**MISS** Minimal clinical experiences have been reduced and competencies have been defined better for each discipline and added in some areas. Rubrics are being added to all competencies and an effort to align pre-clinical and clinical evaluation is ongoing. New technologies - implants, CAD/CAM, HER, digital radiography - have added to the curriculum and, with its implementation, guidelines and competencies have been added and changed. Evidence-based decision making is emphasized more and its correlation with current accepted practices.

**OKLA** Yes. As of the spring of 2012, we changed from a discipline based clinical system to a combined discipline based “block care” clinic for 2<sup>nd</sup> and 3<sup>rd</sup> year students, and a “comprehensive care” group clinical system for our 4<sup>th</sup> year students. Instead of separate individual clinics devoted to a specific discipline, we now have nine 12 chair “team”, or “group” clinics. A comprehensive care director for each 12-chair clinic is assigned six 3<sup>rd</sup> year students and six 4<sup>th</sup> year students. The director oversees all the treatment for the 4<sup>th</sup> year students. “Block care” faculty from the various disciplines, who rotate through the nine group clinics, oversee the treatment provided by 2<sup>nd</sup> and 3<sup>rd</sup> year students in these groups. Along with these changes, there has been a reduction of the specific required procedures that now must be accomplished by the end of the 3<sup>rd</sup> year of each block care discipline. The 4<sup>th</sup> year comprehensive care clinic currently involves a specific requirement system, however, it is anticipated that this would be changed in the future. This is a very new system for us at this time. These changes were mainly driven by several factors: ideological “suggestions” passed down from ADEA/ADA; a perceived lack of viable patients for our student clinics; a desire to improve our curriculum (especially treatment planning skills); a desire to make the facility more patient friendly; and a desire to improve the activity and productivity in our student clinics.

**TENN** Yes. Some departments still use traditional clinical requirements while others now use activity points overall combined with the minimum specific procedures as prerequisites to challenging clinical exams for competency. Competency exams are still required in all areas. We have just moved this year to General Dentistry, Group Leader clinics from the traditional discipline based clinics for all years of students.

**UTHSA** Yes. Although this school has, for more than 30 years, been in the mode of a general dentistry clinic rather than having discipline clinics, the use of faculty in a certain discipline has diminished more in the last five years. Clinical requirements have become less formalized, and a points system has replaced requirements for measuring student productivity, but faculty members continue to monitor specific procedures to assure students get a broad range of experiences. Although a complete change in teaching methodology and philosophy has not occurred, the advances in methods used are due to advances in technology and science, not to generational characteristics in students. There has been a continuous advance in education techniques and curriculum content due to advances in technology, improved availability and access to scientific knowledge, and advances in treatment concepts. It is appropriate that this advance continues with future new knowledge and capabilities in Dentistry and in education.

**UTH** There has been an attempt, mainly through departmental and multi-departmental calibration sessions, to align faculty with best evidence-based recommendations for diagnosis, treatment, and biomaterials. Changes are not directly correlated. The push for evidence-based practice has more direct linking to trends within the profession and sister professions like medicine. However, anecdotally, it seems that the current generation of students is quite receptive to evidence-based practice.

## II. DIGITAL DENTISTRY

- A. Has your school incorporated digital dentistry as impression taking, model formation, CAD-CAM, etc.?
- B. Which technologies are you using? Please name the brands.
- C. What have been your experiences with these technologies?
- D. To what degree are they used in the teaching program?
- E. Has this technology had a positive or negative impact on clinic income?
- F. Are all interested faculty trained or is there a specific “digital guru”?

- G. Has it replaced conventional techniques or does it augment conventional techniques?
- H. What is the response from the students?
- J. Are intraoral digital impressions taken or conventional impressions which are scanned afterwards?
- K. Do the students realistically have enough time to totally complete a restoration from preparation to cementation in a single appointment (morning or afternoon session)?
- L. Please indicate the time length of a morning or afternoon clinic session.

**BAY** Yes, in the future we will be introducing some of these concepts into the pre-clinical areas. D4 students are currently exposed to new technology in the ATC (Advanced Technology Clinic) where they use digital impression technology (iTero) and CAD/CAM (E4d and CEREC). The D4s also use the Diagnodent for caries identification, the Isolite system for moisture control during the restorative process, the Seiler IQ microscope for tooth preparation, electric handpieces (Adec), the Odyssey and Sirona soft tissue lasers, and bipolar radiosurgery around metal restorations when indicated. We have seen no financial impact on clinic income resulting from the use of advanced technologies. All D4 faculty members are trained in the use of the digital technology in use in the ATC clinic. Digital technology augments conventional techniques used here. The students are enthusiastic about learning new techniques and embrace the new technology. Both. Intraoral digital impressions are taken in the ATC. Conventional impressions, which are taken by our students and sent to a lab, may be scanned by the lab in order to facilitate the fabrication of the final restoration. At times, both digital and conventional impressions are scanned on site and burn-out models are milled from plastic burn-out material for casting. Patterns are placed on the milled die and margins are waxed and refined before investing and casting. Generally no. Our typical morning clinic session runs from 10:00 AM - 1:00 PM; our afternoon session is a little longer, running from 1:00 - 4:30 PM.

**LSU** Yes. CEREC 3.8 and 4.0 software with red cam and blue cam acquisition units. These are primarily utilized by the Comprehensive Care Department/Operative Dentistry Division (junior and senior years). The Department of Prosthodontics is utilizing Lava Scan Acquisition Units in their junior clinic. Some faculty from both departments have training on both. Very good experiences with CEREC CAD/CAM. Increased utilization in 4<sup>th</sup> year programs. Since this is the first year Lava is being integrated into the junior Prosth clinic, no comments on experience with this technology. CEREC; 3<sup>rd</sup> year - didactic. Lab, and possible milled restoration in clinic; 4<sup>th</sup> year - didactic and possible milled restoration in clinic. LAVA: 3<sup>rd</sup> year didactic and clinic; 4<sup>th</sup> year possible clinic. Too early to tell since this is the first year where both 3<sup>rd</sup> and 4<sup>th</sup> year students are eligible to utilize either CEREC or Lava scan technology (and milling tech with CEREC).

There is a new “digital guru” following the retirement of the trailblazing “guru.” The new guru has 8 trained Comprehensive Dentistry Department faculty in both CEREC and Lava. Prosthodontics department has an additional 5 faculty trained in Lava. It augments conventional /traditional techniques. (*See related CEREC Protocol - none submitted*). Very positive response. The students appreciate being introduced to new technology as part of their clinical training. Yes, our protocol demands both impression technologies. Depends on patient selection/student’s clinical skills/restoration attempted/restoration material selected/technological system selected (CEREC or Lava). Our clinical sessions are 3 hours and 15 minutes long.



**MISS** We utilize both CEREC and iTero units in our clinical practices. In January 2013, we will introduce a pre-clinical course specifically for introducing digital dentistry to students. Current instruction is limited and spread over several courses. CEREC (red-cam), iTero, 3Shape scanner and software with Zenotech 1 milling unit. Slow to gain use due to faculty training, perception, and student familiarity. The faculty who do use the technology and students who have worked with the technology are very positive. Use is going up based on demand. Inlay, onlay, full coverage crown and bridge procedures. If amount of use is the question, it is increasing in use due to students beginning to consider as an option during treatment planning. Too early to say (financial impact). Hopefully it will have a positive impact with reduction in metal cost versus cost of milling materials, or savings on impression materials, and if it can lead to increase production, this would also decrease cost per unit. Interested faculty was trained, however, comfort with the procedures is at different levels based on the amount of familiarity with each technology. The new digital dentistry course should help with both students' and faculties' comfort level using the new technologies. Currently, it only augments. We are working on getting faculty and students comfortable using the technology and considering these as options when treatment planning. In general, excited and positive! Both methods are capable. More currently are taken and scanned, but certain faculty with more experience using the technology can scan and create chairside in one appointment. The goal is to reduce the number of PVS impressions using the technologies. Not at their level of competency. Certain experienced faculty, some restorations, with CEREC can be completed in a session, but the usual 2 week turnaround can be shortened by using these technologies. Morning - 8:00 AM and 10:00 AM. Afternoon - 1:00 PM and 3:00 PM. Certain clinics limit appointments to 8:00 AM, or 1:00 PM only.

**OKLA** Our students have some limited one-on-one exposure in the clinic to digital impressions and CAD/CAM technology. We have one mobile CEREC blue-cam (Sirona) cart that can be moved to the clinic where the student will be working (still-images stitched together). An iTero unit for digital impressions (video image). We have tried, but are not currently using the Lava (3M) system for digital impressions. CEREC - experiences overall have been reported as good. iTero - we have discontinued its use temporarily due to calibration problems, restorations were not fitting accurately. These systems currently are used on a limited basis due to the small number of faculty that are sufficiently trained in their use. We are anticipating acquiring 10 more CEREC units and initiating a pre-clinical curriculum to introduce it to all students. There are so few of these procedures performed in our clinics, that it has had very little impact on our income at this time.

Currently there are only a handful of faculty members who are sufficiently trained in the procedures to allow them to instruct the students in our clinics. It is hoped that, with the addition of more CEREC units, there will be more in-house training available for faculty. It has not replaced conventional techniques at this point. The students would like to have more experience with these technologies. Intraoral digital impressions are mainly used, rather than scanned conventional impressions. Yes, we do have students complete these procedures in a clinic session. Our clinical sessions last for 3 hours - one session in the morning and one in the afternoon.

**TENN** Yes. CAD/CAM CEREC. There are 283 CEREC units in 46 dental schools in the United States. This includes both Red and Blue CAM units. Introduction to the technology is started in the 1<sup>st</sup> year Morphology course with a software introduction and continues in the 2<sup>nd</sup> year Fixed and Esthetic courses. The students then use it in the clinic. The students prepare, design, and mill an all-ceramic crown and an onlay in their 2<sup>nd</sup> year. They then stain and glaze the crown and bond both teeth on the typodont. In the clinic, the students have been averaging 70-90 inlays, onlays, or crowns since 2002. They make an impression of their preparation and then mill the restoration from a model, delivering it at the next appointment. We have written two articles about how we have integrated the technology into the curriculum: one in *Inside Dentistry*, March 2012, and another in the *Tennessee Dental Association Journal*, Spring 2012. These technologies are used mostly in the D4 program. This technology has saved the school the lab bill for approximately 800 direct restorations over the last 10 years. The students can get either Fixed or Operative credit for the restoration, so the technology is utilized when necessary. It has benefited the patients because many of the restorations are inlay/onlay restorations rather than crowns which save tooth structure for the patient. There has been one specific person who has pushed the integration of this technology from the beginning. Most of the restorative faculty have attended a two day hands-on course on how to use the technology. Presently, one of the restorative faculty is assigned one afternoon a week to the esthetic area to help with the patient treatments. Most agree with the benefit of the technology and have been treatment planning more restorations. The fixed faculty have also seen the benefits of the technology and are using it for implant crowns and other single units. The AEGD and Grad Pros residents are also trained in the use of CEREC technology. The students still make an impression and make the restoration from a model. It has eliminated the long wait for it to return from the lab and has given the student better fitting and looking restorations. It has also changed a lot of crowns to onlays to save tooth structure and making the students think of more creative restoration designs. The students are excited about the technology and enjoy working with it. They like the idea that they do not have to wait for the lab to return the restoration. Conventional impressions are scanned until the student has done 5 restorations from the model. Sometimes, if only one or two students and the restoration is simple in the esthetic area, then the instructor will take the pictures intraorally and the restoration will be made in one appointment. This is not the usual situation. Our students do not have enough time. The only time that the esthetic clinic is open is 3 afternoons a week, from 1:00 PM - 4:30 PM.

**UTHSA** Yes, to a continuously increasing extent. New digital technology has not been incorporated immediately after its development, but, as it is being refined and proven, it is incorporated. Procera (Nobel Biocare) and CEREC (Sirona). Although use is increasing rapidly, it has, until recently, been limited. Although there had been no organized recall for evaluation, it is the impression of the faculty that those restorations created with the technology are performing extremely well. Still less than 10% of indirect restoration, but increasing rapidly. Usage has been minimal, so financial impact at this point is negative (mainly due to start-up capital investment). The financial impact statistics are not available at this time. The technology is still taught by a few faculty members. Technology augments. Students are generally very eager to learn to use this technology, because they are taught that the profession is moving rapidly toward their general use. Both impression methods are used. Yes, when they plan a chairside restoration, a faculty member works with only a few students at a time to assure preparation and delivery in the same appointment. Sessions are either 3 or 4 hours, depending on day and class.

**UTH** Yes, although this process is in its early stages here. E4D (by D4D) is in the process of being incorporated into the clinic for dental students. iTero (Cadent) has been utilized in faculty practice for several years, with limited exposure to students. In general, digital impression techniques are increasing in their acceptance at our institution. Student exposure has been limited to theoretical (lecture) and occasional utilization in clinic (at the discretion of senior faculty). There is a priority order for training. Two faculty are the primary “gurus.” This past summer, group practice leaders and first attending faculty were trained. The current outlook is that it may augment conventional techniques. Generally students are enthusiastic, when given the opportunity to learn. With the iTero, the impression is intraoral scanned. When the E4D is used, a digital impression is taken and so is a PVS traditional impression, in case we need to verify or re-scan. Our students do not have enough time. Morning session and afternoon sessions are 3 hours in length.

### **III. RESTORATIVE DENTISTRY**

A. Are operative procedures in the clinics done the same way as taught in pre-clinics?

**BAY** Yes, for the most part. Preparations are as minimally invasive as possible dictated by tooth anatomy, caries and the restorative material of choice therefore they will vary from the “ideal” outline form taught in the pre-clinical course.

**LSU** To the highest degree possible. This is the reason for our yearly “calibration.”

**MISS** IN general, we work to make our pre-clinical and clinical experience as similar as possible as far as techniques and equipment. Some courses use different materials for the students to see and use that we don’t have or are of limited use in clinics, and some procedures you just cannot simulate well in pre-clinic, for example retraction cord usage.

**OKLA** Up until now, the treatment techniques and materials utilized in the clinic were fairly similar to that taught in the pre-clinic. With our new clinic system involving nine separate teams, it will remain to be seen if that holds true. Standardization of procedures, and calibration of evaluation may be much more difficult with our new system.

**TENN** For the most part and certainly when operative faculty are involved; however, with a new Group Leader system in place, even though calibrations sessions have been given, there may be some variations being taught.

**UTHSA** Yes. In pre-clinical sessions, the students are presented with clinical situation to solve. There are simulated caries lesions in the typodont teeth to be treated. So, they tailor the treatment for the situation in pre-clinical sessions just as they will in clinical sessions.

**UTH** In general, yes, especially if pre-clinical faculty are attending in clinic. Calibration is an ongoing work in progress. We do have a large number of part-time faculty from the private sector and they tend to be a little more free in their interpretation of how things should be taught.

B. Are the same materials, instruments and burs used?

**BAY** There are fewer choices with respect to burs available for clinical use versus pre-clinical use. With respect to materials, more choices are available for clinical use versus pre-clinical use.

**LSU** Yes.

- MISS** All primary materials used in clinic are used in pre-clinical. Some materials used in pre-clinical are not available in clinics and some clinical specialty items are not used in pre-clinic.
- OKLA** The materials, instruments and burs are mostly the same.
- TENN** Mostly, though some different materials may be used in the esthetic clinic under direct supervision of the Director.
- UTHSA** Yes.
- UTH** In general, yes. However, at times, purchasing decisions are made in clinic that does not reflect pre-clinic utilization. Examples include Rengi liner format (paste/paste versus powder/liquid) and rubber composite polishing points (3-step differing grit versus all-in-one).

C. If there are differences, how are they reconciled?

- BAY** With respect to rotary instruments, our pre-clinical students use some burs which allow them to cut more conservative preparations (the #329 bur, for example). These burs are not all available for clinical use in an effort to control operational costs. In this particular case, it is thought that students who have matriculated to the D3 and D4 years have honed their hand skills and are able to cut more conservative preparations with a larger bur (#330) making it unnecessary to stock a wider variety of burs. With respect to the restorative materials available for clinical use, a wider variety of composite materials is available to accommodate the esthetic and functional demand of the patient which are not encountered with the typodont in the pre-clinical simulation lab.
- LSU** Referral to appropriate Faculty Committee.
- MISS** We have faculty request items that you have to have faculty permission to use so the faculty knows that the standard materials are not being utilized.
- OKLA** Not applicable
- TENN** We continue to provide periodic calibration sessions and access to all preclinical didactic materials for all faculty who are not already directly involved in pre-clinical labs.
- UTHSA** Not applicable
- UTH** Informal communication between members of clinical and pre-clinical faculty. We also have a committee that is to look at the first and second year kit makeup and try to correlate the two.

D. What methods/systems are taught for polishing composites?

- BAY** Here, we use the Brassler composite finishing diamonds and carbides, Brassler lavender points, Enhance points and cups, and Brassler EP esthetic polishing disc system. Rebonding with OptiGuard™ is the final step in finishing and polishing the restoration.
- LSU** Multi-fluted carbide finishing burs (Brassler), Soflex discs (3M). Brassler polishing kits (points and cups).
- MISS** Following finishing with composite finishing burs; primarily Enhance point, cups, and discs followed by PoGo polishing system from Dentsply. 3M Soflex polishing discs and Brassler's EP Esthetic polishing system are also used as needed.
- OKLA** Our students are taught the following sequence for finishing and polishing resin composite:
- carbide finishing burs (8 fluted, 16 fluted and 32 fluted in four shapes)
  - abrasive discs when indicated (4 abrasive grits)
  - rubber abrasive points and cups
  - Astropol (Ivoclar) - finishing, polishing, high polish, and abrasive brush

**TENN** We instruct the student doctors to morphology and anatomically insert and adapt the composite resin material to final surface layer to prevent excessive bur finishing. Overview below is for a Class III composite resin insert, finishing, and polishing but is applicable for Class I, II, IV, and V restorations. The approach presented below is the most simplistic approach used thus far.

- This increment should be “anatomically morphologically” placed for pre-contouring of the composite resin material.
- You must carefully assess your restoration for surface porosity, defective margins, overhangs, and over- and under-contouring.
- The #12 Bard-Parker blade is placed in a scalpel handle.
- Diamond lace (perforated or solid) and plastic finishing strips are available for proximal finishing of the composite resin material. They are taught in order of the grit size. After each grit size is used the students are instructed to rinse and dry prior to the next grit size.
- If you pre-contoured the composite resin appropriately, the egg shaped Fine (Yellow Band) OS1 (Figures 9a and 9b) bur is used to reduce the lingual surface of the composite resin material. If you gross filled the material without thought to anatomical morphological thinking, begin with the Regular (red band) OS1. ET OS1 for the lingual. Keep in mind that the ET carbide finishing burs are color coded: Red = regular or gross finishing; Yellow = fine; and White = ultrafine. The finishing step is accomplished by using the above-mentioned burs in the high-speed handpiece with a light sweeping stroke and touch from the lingual concavity to the marginal ridge. Do not damage the surrounding tooth structure. Place an amalgam band between the teeth as a protective barrier if warranted for avoidance of damage to the adjacent tooth. The students are reminded to rinse after each bur to remove composite resin debris.
- Clinically, water is used to avoid excessive heat and/or reduction of the handpiece speed for better visibility and lessen amount of water.
  - Clinically, after the excess material has been removed and the restoration contoured with the finishing burs, the occlusion should be assessed for proper contact. You should do as much of the final finishing and polishing with the rubber dam in place to avoid interference of the soft tissues and saliva. Clinically, you should always examine the occlusion prior to treatment so you will have a mental photograph of the existing occlusion prior to operative care. The final polishing is accomplished after the occlusion has been approved by the patient. The polishing of the restoration is done with Enhance and PoGo point and/or wheel. The polishing wheel is an excellent aid to open embrasures (exclude the cervical) and smooth the surfaces. To use the disc to remove composite resin material from the lingual concavity or marginal ridge will result in a flatten surface (undercontoured). The appropriate instrument to use is the PoGo polishing point. Students are instructed to reduce the speed of the handpiece to avoid heat to the tooth, intermittent pressure, and better visibility without the use of water.
- Post sealant is available but we are not pleased with the sealant presently available in the clinic. post sealant use is taught in the complex restoration course.

We do a step-by-step demo of the lab exercise in lab with illustrations as a class project. We do not teach diamond finishing bur usage at this stage of the student doctors' development due to the damage to tooth structure with diamond burs. The damage at this level is excessive enough with the carbide bur. Diamond bur finishing occurs in the complex restoration and esthetic courses which are given later in the students' development when they working on larger composite restoration surfaces.

**UTHSA** A variety of systems are taught, but the primary ones include a series of abrasive disks (Soflex) and kits of silicone cups, points, and disks impregnated with different grits of abrasive (Jiffy and Enhance).

**UTH** Generally speaking, the protocol is 1) carbide composite finishing burs, then 2) rubber polishing points and Soflex discs, finishing with 3) impregnated brushes and/or diamond polishing paste.

E. Are any bulk fill composite techniques taught? If yes, please describe.

**BAY** No, we do not teach bulk fill composite techniques.

**LSU** Not at this time

**MISS** No, other than dual-cure core buildup material we teach layering technique of all indirect composite restoration.

**OKLA** No, we do not use bulk fill resins at this time

**TENN** No

**UTHSA** Only for very small restorations where incremental fill would be difficult or would have not advantage.

**UTH** Outside of bonded core buildup material, no.

F. Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? What about new techniques – how long to implement into pre-clinic labs and clinics?

**BAY** Generally about 1 year but sometimes a little longer.

**LSU** Immediately upon approval, the clinic committee chair e-mails approval for a purchase order to be transmitted to the appropriate manufacturer(s) or dental supply company(s) for a price quote. As soon as information is received, the purchase is completed. I would say this could take 1 - 2 weeks. Depends on where in the curriculum it is introduced. Different departments/divisions could have a different protocol for technique change. The course objectives and other course parameters could also determine when changes would be implemented upon approval.

**MISS** Once approved it can be ordered and included in both pre-clinic and clinic. Faculty acceptance and willingness to adapt can slow the process.

**OKLA** New materials may be introduced in the clinic after the financial section of our clinic operations department approves the expenditure, and then orders and receives the material being added. The material can be utilized as soon as the faculty is made familiar with its use. This might take several months. We have no formal mechanism to oversee the introduction of new techniques in the clinic. Clinical instructors often simply decide to initiate the utilization of a new or different technique on their own. The techniques taught in the pre-clinic usually go through a vetting procedure by the department, and usually might take six months to a year to allow time to properly incorporate it into the preclinical curriculum.

**TENN** For clinic, generally within a month depending on the speed of the business office in placing the order. For pre-clinics, course directors must wait until the next cycle of the course. Same as above for pre-clinics, for clinic, the technique should have cycled through pre-clinic first.

**UTHSA** Length of time for incorporation - ?????

**UTH** Getting new materials into clinic and pre-clinic can occur quite quickly. New techniques take a bit more time.

## IV. SCHOLASTIC

A. What is considered scholarly activity at your institution?

### **BAY Research and Scholarly Activities:**

1. Areas of research and scholarship (the faculty provide a lay summary of their research/scholarship that describes the general area of interest, that highlights their accomplishments in this area, and that discusses the overall significance of their work.)
2. Invited Presentations (List invited and not voluntary talks, i.e., where you voluntarily submitted an abstract to a national meeting and then presented the work. These voluntarily submitted abstracts/presentations should be placed in another section. If the same talk was given by you more than once, simply list subsequent dates and places it was given. Continuing Education Courses given are placed under another area.
3. Non-invited talks without published abstracts.
4. Grants
  - a. Funded
  - b. Pending
  - c. Not Funded
5. Manuscript Review
  - a. Journals Refereed; Book/Chapter Review
  - b. Editorial Boards
  - c. Editorship
6. Grant Reviews
  - a. Study Section, Review Panel, Special Emphasis Panel
  - b. Ad hoc
7. Professional and Scholarly Societies
8. Contribution to professional organizations (e.g. committee and offices held)
9. Participation on national or regional board examination, certification, or accreditation committees
10. Meeting where chaired session (invited only)
11. Programs and symposiums you organized (Give title, dates, location, affiliations, approximate number of attendees, and whether you were the primary organizer or a co-organizer).
12. Awards
13. Other Indices of Scholarly Performance

**LSU** Mentoring, presentations at professional

**MISS**

1. Publications:
  - a. First author and co-authored
  - b. Primary author of textbook
  - c. Chapters in textbooks
  - d. A completed and defended dissertation (part of PhD requirement)
  - e. A completed and defended thesis (part of MS requirement)
2. Other scholarly activities:
  - a. Board certification by an ADA recognized specialty board
  - b. Mastership in the Academy of General Dentistry
  - c. Fellowship in the Academy of General Dentistry
  - d. Approved and funded federal, state, industrial or foundation-supported research grants of at least \$25,000

Production of an advanced computerized teaching program

**OKLA** Scholarly Activity included: invitation to chair or organize symposia; editing books or journals in professional discipline; publications in peer-reviewed journals; primary author of a textbook; presentations at national/international conferences or meetings; acquiring extramural grants of contract funds as PI, through peer-reviewed mechanisms; keeping abreast of current trends and utilizing it to improve educational program; participation in poster sessions at regional, national, and international meetings; serving as consultant on government research review committees or study sections; special research honors or awards received.

**TENN Research/Creative and Other Scholarly Activities**

All faculty at UTHSC are expected to contribute to their professional discipline by participating in research/ creative and other scholarly activities. Such activities can be broadly defined and encompass a wide range of activities, as can be seen in the examples below. The results of such activities must be disseminated to the wider community through discipline-specific/discipline-related publications. The table below lists the minimum number of such publications that is required for promotion. Note that tenured/tenure track faculty and non-tenure track faculty who were hired primarily (i.e., at least 80% effort) to contribute in the area of research/creative and other scholarly activities are required to have at least 5 discipline-specific/discipline-related publications to be promoted to the rank of Associate Professor and 10 additional discipline- specific/discipline related publications to be promoted to the rank of Professor (i.e., the same level of scholarship as is required for the tenure-track faculty). Non-tenure track faculty who were hired primarily for other activities (such as teaching or patient care) are required to have fewer publications for promotion. Examples of criteria that should be used to evaluate research/creative and other scholarly activities:

- a. Demonstrates ability to conceive, execute, and report on research investigations (from grantsmanship to publication)
- b. Exhibits a creative and innovative approach to research
- c. Publishes research in appropriate discipline-specific/discipline-related journals
- d. Collaborates with other faculty members in research projects
- e. Develops and disseminates practice guidelines and/or health policy briefs
- f. Publishes clinical case studies, reports for the lay press, patient brochures
- g. Shows continuity in research and perseverance in achieving research goals
- h. Obtains and maintains adequate external funding for scholarly activities
- i. Responds appropriately and in a timely manner to grant reviews
- j. Pursues opportunities to convert results of research into practical applications having societal or commercial value (e.g., obtains patents)
- k. Serves as an invited expert at other institutions or scholarly groups
- l. Participates as an invited speaker for research symposia, seminars, and special lectures

Minimum Number of Discipline-Specific/Discipline-Related Publication required for Promotion		
Track	Assistant to Associate Professor	Associate to Full Professor
Non-tenure (clinicians, teachers)	2	5
Non-tenure (researchers)	5	10
Tenure	5	10

**UTHSA** No response submitted



**UTH** Peer-reviewed publications (traditional, clinical, translational, educational, etc.); Presentation of scholarship (invited lectures, continuing education, abstracts/posters, etc.); Service and leadership in scholarly organizations (IADR, NIH, ADA Council on Scientific Affairs, etc.); editorial board service, journal reviewer, development of novel educational media/technology; thesis committee service.

B. What are the expected standards for Assistant, Associate, and Full Professors?

**BAY Promotion Criteria**

- A. Evaluation and Promotion Criteria Rating Scale: For all faculty in both the Principal Faculty and Non-Principal Faculty the scale below will be used to rate faculty accomplishments in each area of contribution: research, education or professional service (where appropriate), and institutional service to the HSC.  
Rating: Exceptional: Performance in the academic area is of the highest quality.  
Excellent: Productivity and quality significantly exceed performance standards and expectations.  
Good: Productivity and quality exceed routine performance standards and expectations.  
Acceptable: Performance meets routine standards and expectations.  
Unacceptable: Performance is not acceptable. Productivity and quality do not meet routine performance standards and expectations.

B. Additional factors for promotion.

1. Tenure track

- a. Assistant Professor to Associate Professor: Requires a rating of excellent in the primary academic area of: (1) research, (2) education or (3) professional service plus evidence of emerging national recognition; additionally requires a rating of at least acceptable in the secondary academic area. The candidate is rated in only two of the three academic areas. Also, institutional service contributions to the HSC must be rated as at least good.  
b. Associate Professor to Professor: Requires a rating of exceptional in the primary academic area of: (1) research, (2) education, or (3) professional service plus evidence of a high level of national/international recognition; additionally requires a rating of at least good in the secondary academic area. The candidate is rated in only two of the three academic areas. Also, institutional service contributions to the HSC must be rated as at least good.

2. Non-tenure track

- a. Assistant Professor to Associate Professor: Requires a rating of excellent in the primary academic area of: (1) research, (2) education or (3) professional service plus evidence of a regional reputation [1]. Institutional service must be rated as at least good.  
b. Associate Professor to Professor: Requires a rating of exceptional in the primary academic area of: (1) research, (2) education, or (3) professional service plus a high level of national and/or international recognition. Institutional service must be rated as at least good.

Footnote: Regional reputation in a clinical specialty area and/or basic science field of study or endeavor

## **LSU Tenure Track**

### **A. Clinician/Educator Path to Tenure**

A full-time member of the faculty whose professional activity involves a major commitment to clinical teaching, service, and to a lesser extent, research, will be appointed to this pathway on the tenure track. Primary appointments in this pathway may be held in any clinical department and promotion will be based on peer-recognized achievements and scholarship within one's discipline. Members of the faculty appointed to this pathway will be individuals who are committed to clinical education and patient care. The faculty members on this pathway must serve as exemplary clinical educator role models for students and residents. Advancement on the Clinician/Educator track will be granted to individuals with documented excellence in clinical teaching and practice, peer esteem, and scholarly activity in the form of documentable contributions to the corpus of knowledge in their discipline. Such contributions should include peer-reviewed original papers, review articles, book chapters, and other forms of scholarly activity. Extramural funding is not required but documentation of teaching excellence and service is expected.

### **B. Assistant Professor**

1. Highest appropriate degree requisite in the field. DMD, DDS, BDS, or Master's degree from a fully accredited institution.
2. Potential for teaching, advising, and clinical contributions.
3. Participation in departmental activities and on LSUSD committees.
4. Excellence and scholarly approach in patient care.
5. Evidence of ability to perform scholarly activity including peer-reviewed publications, as well as meet other high standards of performance prevailing in his/her discipline.
6. Active enrollment in CE and/or postgraduate education courses.

### **C. Associate Professor with Tenure**

Promotion to the rank of Associate Professor with tenure is reserved for faculty regarded as accomplished/skilled clinicians with evidence of a scholarly product, often with a regional or national reputation. All of the expectations for the assistant professor rank pertain in equivalent or greater measure for the rank of Associate Professor. The following minimal guidelines must be satisfied for appointment or promotion to the academic rank of Associate Professor. Meeting these criteria does not guarantee promotion. Evaluation of candidate involves both qualitative and quantitative judgments. Advancement to this rank is based on following criteria:

1. **Teaching:** Demonstrated growth and excellence in teaching and patient care since previous
2. **Appointment** as assistant professor as documented by the department chairman. These may be evidenced by:
  - a. Significant directorship of at least one of the following: course director or co-director, elective course director, rotation coordinator, postgraduate coordinator or comparable department responsibility.
  - b. Recognition for excellence and leadership in teaching.
  - c. Active involvement in lecturing to students in basic courses, elective courses and/or advanced courses.
  - d. Development of new teaching materials or curricular initiatives
  - e. Evidence of active participation in postgraduate education.

3. **Scholarly Activity: Growth** as a scholar since previous appointment as Assistant Professor at LSUSD or a comparable institution: (Publications: LSUHSC School of Dentistry - Promotion Policy rev. 9-20-2012 6)  
A minimum of six (6) publications in reputable, peer-reviewed journals (see Appendix A) whose contributions are selected by editors on the basis of scientific quality or merit are required. Of these six publications, the candidate must publish at least three as first /senior author; the remaining three may be co-authored. All publications since the last promotion/tenure request should be included in the promotion packet in Folder 2. Articles accepted for publication, but not yet published, will be approved for consideration by this committee with (1.) an official letter of acceptance from the publisher and (2.) proof or copy of the accepted manuscript sent to the publisher. Theses, dissertations, abstracts, and course manuals are not considered as publications in the scholarly definition for promotion.
  1. Publication.
  2. Chapters in textbooks (first, second or senior author) will be accepted in lieu of one (1) co- authored publication
  3. Board certification will be accepted in lieu of one (1) first-authored publication if the Board examination was passed during the appointment as an Assistant Professor.
  4. Mastership in the Academy of General Dentistry will be accepted in lieu of one (1) co-authored publication.
  5. Approved and funded federal, state, industrial or foundation-supported research grants of at least \$10,000 will be accepted in lieu of one (1) first authored publication for the principal investigator.
  6. Production of an advanced computerized teaching program can be considered on an individual basis as one (1) first-author or one (1) co-authored publication.

\* Of items (1) through (6) above, only three (3) may be used in lieu of publications. Activities in the majority of the following must be demonstrated:

  1. Elected membership in professional societies.
  2. Participation in local, regional, or national symposia, CE courses or teaching programs.
  3. Service on journal review panels, editorial boards and/or professional advisory boards.
  4. Evidence of progress toward acquiring a national reputation in his/her field.
  5. Evidence of active enrollment in CE and/or postgraduate education courses.

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4. **University, Academic, and Professional Service:** There should be evidence of competent work in one or more of the following: departmental administration, participation in departmental research, school or university committees, community service and professional organizations
5. **Letters of Recommendation:** Three (3) letters of recommendation from recognized, established scholars in the candidate's field outside LSUHSC-NO at the rank of Associate Professor (or Professor) with tenure are required, using the above appropriate criteria for their evaluation. Please refer to the —Guidelines for Letters of Recommendation on page 28, section A.

6. The **maximum interval** for promotion shall be six (6) years (promotion packet prepared and submitted at the end of the 5th year of service). However, promotion packets are commonly submitted during the 5th year of service (packet prepared and submitted after the 4th year of service). Under exceptional circumstances, promotion may be considered after a minimum of 3 years of service. Failure to achieve tenure and/or promotion prior to the 6th year does not preclude the candidate from declaring candidacy in future years. *However, failure to achieve tenure and/or promotion by the end of the 6th year of service will result in termination at the end of the 7th year of service.*  
*All Assistant Professors on a tenure track (Clinician Educator or Scientist Educator) have a "mandatory review date" of five (5) years from the initiation of their contract with LSUHSC. For example, if a faculty member began service on July 1, 2010, his / her mandatory review date would be June 30, 2015. Prior to the mandatory review date, the department head should meet with the faculty member as needed to advise/guide him/her with respect to the criteria required for promotion to Associate Professor with tenure and when the candidate fulfills the criteria to be recommended for promotion.*
- D. **Professor with Tenure**  
Promotion to the rank of Professor with tenure is reserved for accomplished faculty regarded as excellent and scholarly clinicians, often with international recognition. All of the expectations for the Associate Professor rank pertain in equivalent or greater measure for the rank of Professor. Satisfying the following minimal criteria is essential for promotion to the academic rank of Professor with tenure. Meeting these criteria does not guarantee promotion. Evaluation of the candidate involves both qualitative and quantitative judgments.
1. **Teaching:** History of continued recognition for excellence in teaching and patient care since last promotion. This usually includes a substantial amount of advanced teaching as documented by the department chairman and may be evidenced by:
    - a. Directorship of teaching courses.
    - b. Leadership in teaching mentoring and advising students, including awards for teaching effort and/or long-term success in particular teaching assignment. (LSUHSC School of Dentistry - Promotion Policy rev. 9-20-2012 8)
    - c. Active involvement in lecturing to students in basic courses, elective courses and advanced courses.
    - d. Development of new teaching materials, curricular initiatives or computerized instruction.
    - e. Evidence of active participation in postgraduate education.
  2. **Scholarly Activity:** Significant scholarly achievement since previous appointment as Associate Professor:
    - a. Publications: A minimum of eight (8) publications in reputable, peer-reviewed journals (Appendix A) whose contributions are selected by editors on the basis of scientific quality or merit. Of these eight (8) publications, the candidate must publish at least four (4) as first / senior author; the remaining four (4) may be co-authored. These publications must be published since the previous appointment date at LSUHSC-School of Dentistry. None of these publications may have been used for prior promotion credit. Articles accepted for publication, but not yet published, will be approved for consideration by this committee with (1.) an official letter of acceptance from the publisher and (2.) a proof or copy of the accepted manuscript sent to the publisher. Theses, dissertations and course manuals are not considered as publications in the scholarly definition for promotion.

1. Primary author of a textbook will be accepted in lieu of one first /senior publication and one co-authored publication.
2. Chapters in textbooks (first, second or senior author) will be accepted in lieu of one co-authored publication.
3. Board certification will be accepted in lieu of one first-authored publication if the Board examination was passed during the Associate Professor appointment.
4. MAGD in the Academy of General Dentistry will be accepted in lieu of one co-authored publication.
5. Approved and funded federal, state, industrial or foundation-supported research grants of at least \$10,000 will be accepted in lieu of one first authored publication for the principal investigator.
6. Production of an advanced computerized teaching program will be considered on an individual basis as one first-author or one co-authored publication. LSUHSC School of Dentistry - Promotion Policy rev. 9-20-2012 9

Of items (1) through (6) above, only three may be used in lieu of publication.

b. Activities in the majority of the following must be demonstrated:

1. Grants, Awards, and/or honors for research and research productivity.
2. Office holder in professional organizations and/or governing board (e.g. chairs of committees and officers).
3. Service on national journal review panels, editorial boards and/or professional advisory boards.
4. Recipient of professional honors and awards and invited and/or named lectureships.
5. Presentation at local, regional, or national symposia, CE courses or teaching programs.
6. Evidence of a national reputation in his/her field.
3. **University, Academic, and Professional Service:** Continued contributions to departmental, university and scholarly affairs including leadership at department, school or health science center level, including committees and community service.

**MISS** The minimum academic requirements set forth by the Mississippi Board of Trustees of State Institutions of Higher Learning for rank are set out herein:

- A. Professor:
  1. Doctoral, other terminal degree or equivalent
  2. Successful teaching experience
  3. Successful research and/or creative work
- B. Associate Professor:
  1. Doctoral, other terminal degree or equivalent
  2. Successful teaching experience
  3. Successful research and/or creative work
- C. Assistant Professor
  1. Master's degree or equivalent
  2. One year of additional graduate work
- D. Instructor:
  1. Master's degree or equivalent.

**OKLA** Promotion to **assistant professor** normally occurs two years following the appointment at the instructor level, contingent on demonstration of academic achievement and promise. Appointment to assistant professor is usually based on an advanced degree and/or certifications that are standard prerequisites for an academic appointment in his/her discipline, appropriate experience, and promotion for academic achievement. Promotion to **associate professor** is usually based on five or more years as an assistant professor, a sustained record of academic accomplishment in teaching, research/scholarly achievement, and clinical services, strong academic performance and promise. This record of accomplishment must document an emerging reputation of regional or national scope in the candidate's academic field. Professional publication will be an important element in assessing regional or national recognition, although other factors will be considered.

Promotion to **professor** is a high honor, and is usually based on five (5) or more years as an associate professor and demonstration of superior achievements and continued excellence in their academic endeavors. Faculty at this rank should have fully achieved national or international recognition for work in their respective disciplines as evidenced by major contributions to teaching, research and creative/scholarly activity and professional and University service and public outreach.

**TENN** See response to previous question

**UTHSA General Considerations for Appointment or Promotion Without Regard to Rank: Excellence in Teaching and Research:**

A university health science center, like all other major institutions of learning, is founded on two fundamental objectives: to educate and to advance knowledge. The scholarly achievements of a faculty member in either or both of these areas should, in a large measure, determine the individual's academic rank and tenure status. Scholarly achievement refers to original or imaginative accomplishments in the conduct of one's academic responsibilities in teaching, research, or service. Guidelines for judging the originality or creative nature of scholarly accomplishments are by generally accepted standards. Scholarly achievements may include innovative teaching techniques, methods, and testing; or the innovative applications of existing research findings to the practice of one's discipline or professional area.

**Excellence in Service**

In addition to teaching and research, the faculty of a health science center provide services to patients and to the community. As a consequence, the clinical faculty members generally assume service responsibilities that are often not shared by colleagues in the basic sciences. The competence and scholarly manner with which faculty members discharge these responsibilities should be recognized, because the example of clinical competence is a major aspect of teaching ability. Some faculty members, in addition to their teaching and research activities, assume administrative responsibilities such as serving on committees necessary for the operation of the institution. Other faculty members make contributions that play an important role in the interaction of the health science center with state or national agencies. All of these contributions should be recognized in promotion and tenure considerations.

**Criteria:**

Each individual must be judged in the context of those responsibilities assigned by the Chair. There must be an appropriate division of time and labor, as well as opportunity, to accomplish the academic goals necessary for achieving departmental objectives. It may be difficult for a given faculty member to attain excellence in research, teaching, and service (e.g., patient care, supportive services, administration) when the candidate's departmental assignments exclude time for one or more of these activities. Therefore, the degree of responsibility assigned to an individual is a consideration for the determination of rank.

**Documentation:**

Faculty appointed on the tenure track must present documented excellence in at least two of the three fundamental academic activities (teaching, research, or service) as the major consideration for promotion. Faculty appointed to non-tenure track positions are expected to demonstrate excellence in at least one of the three areas of academic activity and will be evaluated for advancement in rank based on performance in their specialized area of expertise. Faculty appointed to the non-tenure track who are seeking a tenure-track appointment with either a lateral shift or promotion will be evaluated by the criteria established for faculty appointed to the tenure track.

**Associate Professor General Guidelines:**

- A minimum of 3 years in the rank of Assistant Professor or equivalent.
- Academic credentials congruent with the expectations of the school and department.
- Developing peer recognition that is reflected by an emerging national reputation.
- Evidence of scholarly achievement reflected in peer recognition of works from original research, clinical observations, educational programs, etc.
- Significant scholarly accomplishments in at least two of the three academic activities: teaching, research, and service.
- Board certification or its equivalent, if pertinent.

**Associate Professor Teaching:**

- Is effective as a teacher, evidenced by mastery of both content and method and documented by student and faculty evaluation.
- Is responsible for design, organization, coordination, and evaluation of a course or series of lectures.
- Is recognized as an exemplary scientist or clinician whose teaching activities can be documented as providing an outstanding role model for students.
- Demonstrates effectiveness in the development and/or presentation of continuing education or other professional programs including invited presentations.
- Is effective as a supervising professor for M.S. or Ph.D. students.
- Participates in student guidance and counseling.
- Demonstrates innovation in teaching methods and production of texts or educational “software”.

**Associate Professor Research:**

- Demonstrates initiative, independence, and sustained activity in research.
- Publishes research findings and scholarly papers in professional journals; publications in refereed journals are considered more significant.
- Serves on thesis or dissertation committees or Health Science Center research review boards.
- Obtains grants or other monies for research or other scholarly activities.
- Presents research and scholarly findings at professional meetings.
- Demonstrates support of interdisciplinary research.

**Associate Professor Service:**

- Provides staff responsibility for a service or specific area of patient care or clinical teaching for which peer recognition can be documented.
- Serves on committees within the department, school, Health Science Center, and/or affiliated institutions.
- Provides consultation or service to other departments or schools within the Health Science Center and to local, state, regional, or national organizations that seek or benefit from the candidate’s expertise.
- Serves on extramural grant review committees or editorial boards of scientific or professional journals.
- Performs a key administrative role in patient care, research, or teaching activities within a department or division.
- Provides service to the professional or lay community through education, consultations, or other roles.

**Professor General Guidelines:**

- Distinguished performance and maturity as an Associate Professor, generally three to five years at this rank.
- Academic credentials congruent with the expectations of the school or department.
- An established reputation that is derived from national or international peer recognition.
- Sustained scholarly achievement reflected in peer recognition of works from original research, clinical observations, educational programs, etc.
- Sustained scholarly productivity in at least two of the three academic activities: teaching, research, and service.
- Board certification or equivalent, if pertinent.

**Professor Teaching:**

- Sustained and outstanding teaching performance of the examples cited for the Associate Professor level.
- Leadership through design, organization, coordination, and evaluation of a course or courses (undergraduate, graduate, or continuing education); administrative responsibility at the school or departmental level for curriculum; supervision of staff teaching within a course, department, or school.
- Sustained recognition as an exemplary scientist, teacher, or clinician whose activities can be documented as providing an outstanding role model for students.
- Invitations as visiting professor at other institutions.
- Publication of educational works in relevant journals.
- Responsibility for student guidance and counseling regarding program planning and general curricular activities, as well as consultation to student organizations and groups within and outside of the Health Science Center.

**Professor Research:**

- Is senior or responsible author of papers published in refereed professional journals or other media (books, papers, etc.)
- Recognition for excellence in research by professional or scientific institutions or organizations.
- Serves as Chair of thesis or dissertation committees.
- Receives grants or other monies as a Principal Investigator for research.
- Invitations to participate at national or international professional or scientific meetings.
- Invitations to preside over sessions at national or international professional or scientific meetings.

**Professor Service:**

- Senior staff responsibility for a service or specific area of patient care or clinical teaching.
- Appointment to responsible positions within the institution or its affiliates (Chairs a committee, department, or division; membership on major decision-making Health Science Center committees).
- Recognition as an authority by other schools and departments within the Health Science Center and by local, state, regional, or national organizations or institutions.
- Serves on editorial boards of professional or scientific journals.
- Serves as an officer or committee chair in professional or scientific organizations.
- Consultant to, or serves on, government review committees, study sections, or other national review panels.
- Election to responsible positions on civic boards or organizations concerned with health care issues at the local, state, regional, national, or international levels.



**UTH** All faculty are expected to participate in scholarship, as outlined by Boyers: four main areas of scholarship -- teaching, discovery, integration, and application. Additionally, the following basic guidelines are found in the University of Texas Health Science Center at Houston handbook of operating policies:

“The following guidelines are intended to clarify expectations for, and differences in, the academic ranks of associate professor and professor. General guidelines for each rank are specified, whether for initial appointment or promotion. Examples of the types of activities that are consistent with the general guidelines are given for the three academic activities essential to the mission of The University of Texas Health Science Center at Houston (“university”) (teaching, research and service). These criteria should be considered but are not intended as minimum standards. Appointment as or promotion to senior faculty ranks will be based on demonstrated accomplishments. The distinctions between the associate professor and professor ranks are based on degree of accomplishments; that is, are more quantitative than qualitative.

### **ASSOCIATE PROFESSOR**

#### **General Guidelines for Consideration**

1. A minimum of three years in the rank of assistant professor.
2. Academic credentials congruent with the expectations of the school and department.
3. Developing peer recognition that is reflected by an emerging national reputation.
4. Evidence of scholarly achievement reflected in peer recognition of works from original research, clinical observations, educational programs, etc.
5. Significant scholarly accomplishments in at least two of the three academic activities: teaching, research and service.
6. Board certification or its equivalent, if pertinent.

Examples of the types of activities that are consistent with the general guidelines follow for the three areas of academic activity essential to the mission of the university (teaching, research and service).

#### **Teaching**

1. Teaches effectively, evidenced by mastery of both content and method and documented by student and faculty evaluation. All teaching activities should receive consideration.
2. Takes responsibility for the design, organization, coordination and evaluation of a course or series of lectures.
3. Receives recognition as an exemplary scientist or clinician whose teaching activities can be documented as providing an outstanding role model for students.
4. Develops and/or presents effective continuing education or other professional programs, including invited presentations.
5. Provides effective supervision to graduate students.
6. Participates in student guidance and counseling regarding program planning and general curricular activities, as well as consultation to student organizations and groups within and outside of the university.
7. Demonstrates innovation in teaching methods and production of texts, educational software or courseware.

**Research**

1. Demonstrates initiative, independence and sustained activity in basic science, clinical, outcomes or population research.
2. Publishes research findings and scholarly papers in scientific or professional journals or books; publications in refereed journals are weighted more heavily than non-refereed publications.
3. Presents research and scholarly findings at scientific and professional meetings.
4. Obtains grants or contracts for research or other scholarly activities.
5. Serves on thesis or dissertation committees.

**Service**

1. Provides exemplary patient care that augments the educational and research missions of the university.
2. Provides staff responsibility for a service or specific area of patient care or clinical teaching for which peer recognition can be documented.
3. Serves on committees within the department, school, university and/or affiliated institutions.
4. Provides consultation or service to other departments or schools within the university and to local, state, regional, national, or international organizations that seek or benefit from the candidate's expertise.
5. Serves on extramural review committees or editorial boards of scientific or professional journals.
6. Performs a key administrative role in patient care, research or teaching activities within a department or division.
7. Provides service to the professional or lay community through education, consultations or other roles.
8. Engages in mentoring junior faculty colleagues.

**PROFESSOR****General Guidelines**

1. Distinguished performance and maturity as an associate professor, generally at least 3-5 years at this rank.
2. Academic credentials congruent with the expectations of the school or department.
3. An established reputation that is derived from national or international peer recognition.
4. Sustained scholarly productivity usually in the form of peer-reviewed publications in teaching, research and service.
5. Sustained scholarly achievement reflected in peer recognition of works from original research, clinical observations, educational programs, etc.
6. Board certification or its equivalent, if pertinent.

Examples of the types of activities that are consistent with the general guidelines follow for the three academic activities essential to the mission of the university (teaching, research and service).

## **Teaching**

1. Sustained and outstanding performance of the examples cited for the associate professor level.
2. Leadership through design, organization, coordination and evaluation of a course or courses (undergraduate, graduate or continuing education); administrative responsibility at the school or departmental level for curriculum; supervision of staff teaching within a course, department, school or the university.
3. Invitations as visiting professor at other institutions.
4. Responsibility for student guidance and counseling regarding program planning and general curricular activities, as well as consultation to student organizations and groups within and outside of the university.
5. Sustained recognition as an exemplary scientist, teacher or clinician whose activities can be documented as providing an outstanding role model for students.
6. Publication of educational works in relevant journals.

## **Research**

1. Senior or responsible author of papers published in refereed scientific or professional journals, book chapters and other scholarly works.
2. Receives grants or contracts as a principal investigator for research.
3. Invitations to participate at national or international professional or scientific meetings.
4. Invitations to preside over sessions at national or international professional or scientific meetings.
5. Recognition for excellence in research by professional or scientific institutions or organizations.
6. Serves as chair of thesis or dissertation committees.

Guidelines for Faculty Promotion Page 4

## **Service**

1. Appointment to responsible positions within the institution or its affiliates (chairs a committee, department or division; membership on major university committees).
2. Recognition as an authority by other schools and departments within the university and by local, state, regional or national organizations or institutions.
3. Senior staff responsibility for a service or specific area of patient care or clinical teaching.
4. Consultant to, or serves on, government review committees, study sections or other national review panels.
5. Serves as an officer or committee chair in professional or scientific organizations.
6. Serves on editorial boards of professional or scientific journals.
7. Election to responsible positions on civic boards or organizations concerned with health care issues at the local, state, regional, national or international levels.
8. Engages in mentoring faculty colleagues.

## **Guidelines for the Initial Appointment or Promotion to the Ranks of Associate Professor and Professor, Non-tenure Track**

The criteria for initial appointment as or promotion to associate professor or professor on a non-tenure track are qualitatively identical to those for the tenure track. However, faculty members with non-tenure-track appointments are permitted to concentrate their efforts in the clinical service area or the research area, as appropriate. The same guidelines should be considered for appointment or promotion as for faculty on the tenure track.”

C. If your institution has clinical tracks, what are the expected standard levels for each level?

**BAY Non-tenure track**

- a. Assistant Professor to Associate Professor: Requires a rating of excellent in the primary academic area of: (1) research, (2) education or (3) professional service plus evidence of a regional reputation. Institutional service must be rated as at least good.
- b. Associate Professor to Professor: Requires a rating of exceptional in the primary academic area of: (1) research, (2) education, or (3) professional service plus a high level of national and/or international recognition. Institutional service must be rated as at least good.

**LSU Non-Tenure (Clinical) Tracks**

**1. Clinical Educator Track**

Qualified professorial academic ranks equivalent to Instructor, Assistant Professor, Associate Professor, and Professor shall carry the proper descriptive prefix and/or affix following their rank. I.e. Associate Professor of Clinical Endodontics (full-time / non-tenure). Faculty members holding ranks in this category may be appointed on a yearly basis. Appointments may be renewed one or more times. A non-tenured faculty member must be notified of the intent to not renew the contract one year prior to the expiration of the contract. Faculty members in this category are not employed on a —probationary basis and will not be routinely evaluated as to qualifications for tenure.

For promotion in the non-tenure track, a major portion of the academic commitment for non-tenured faculty will be student contact. Additional criteria are based on scholarly and educational activity.

Individuals transferring from part-time to full-time status shall be considered first for an initial appointment in the tenured or non-tenured track, as appropriate. All transfers from full-time to part-time status shall be reclassified according to titles listed in the non-tenured track qualifications.

**A. Instructor of Clinical (Discipline)**

The individual shall possess the appropriate degree in his/her field of teaching (a Bachelor of Science or Arts degree in any discipline and Associate of Science degree or certificate in Dental Hygiene or Dental Laboratory Technology). The individual should show promise of the ability to perform successfully the duties (teaching, research extension, or other scholarly activity) for which he/she was employed or which may be assigned in the future. The minimum interval for promotion to Assistant Professor of Clinical (Discipline) is three (3) years at this or another comparable institution.

**B. Assistant Professor of Clinical (Discipline)**

Appointees at this rank shall hold as a minimum the terminal degree(s) in the discipline. This appointment is for full-time faculty in the clinical sciences who are effective in teaching and service programs and are essential for patient care, but whose research, publications, or scholarly activity does not warrant appointment or promotion to tenured positions.

1. Potential for teaching, advising, and clinical contributions.
2. Willingness to participate in departmental or school committees.
3. Excellence and scholarly approach in patient care.
4. Active enrollment in CE and/or postgraduate education courses.

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C. Associate Professor of Clinical (Discipline)

Appointees at this rank shall hold as a minimum the terminal degree(s) in the discipline. Promotion to Associate Professor of Clinical (Discipline) is reserved for faculty members regarded as excellent and scholarly clinicians, often with a local or regional reputation. The minimum interval for promotion to Associate Professor is three (3) years at the Assistant Professor rank at this or another comparable institution.

1. Teaching - Demonstrated excellence in teaching (as documented by the department chairman).
  - a. Recognition for excellence and leadership in teaching and patient care or in dental laboratory support.
  - b. Major academic involvement in departmental courses.
  - c. Development of new teaching materials or curriculum initiatives.
  - d. Evidence of active support of departmental teaching and patient care activities such as postgraduate education, residency programs, fellowship programs or extramural programs.
2. Scholarly Activity - At least three (3) of the five following criteria must be fulfilled.
  - a. Minimum of three (3) co-authored articles (at least second author), in quality peer-reviewed journals. One such article may be substituted with being co-investigator on a research grant or contract. Primary author of textbook will be accepted in lieu of one first-author and one co-authored publication. Chapters in textbooks (first, second or senior author) will be accepted in lieu of one co-authored publication
  - b. Elected membership in professional societies.
  - c. Presentations at local, regional, or national symposia.
  - d. Completion of a recognized specialty program or evidence of advancement within the individual's field. E.g. recognized fellowship or board.
  - e. Active enrollment in CE and/or postgraduate education courses.
3. University, Academic, and Professional Service -
  - a. Active membership/participation on LSUHSC committees and School of Dentistry activities. (LSUHSC School of Dentistry - Promotion Policy rev. 9-20-2012 19)
  - b. Evidence of beginning leadership in administrative performance at the departmental and school level.
4. Letters of Recommendation – Three (3) letters of recommendation from recognized, established scholars in the candidate's field of at the rank of Associate Professor or Professor are required, using the above appropriate criteria for evaluation. Please refer to the —Guidelines for Letters of Recommendation on page 29, section B.

D. Professor of Clinical (Discipline)

Appointees at this rank shall hold as a minimum the terminal degree(s) in the discipline. Promotion to Professor is reserved for exceptional faculty, often those with regional or national recognition. All of the expectations for the Associate Professor rank pertain in equivalent or greater measure for the rank of Professor. Normally, a minimum of five (5) years of satisfactory service at the Associate Professor level is a prerequisite for consideration for promotion. Under exceptional circumstances, promotion may be recommended earlier.

1. Teaching: demonstrated excellence in teaching and patient care (as documented by the department chairman).
  - a. Significant directorship of at least two (2) of the following: course director or co-director, or elective course director, rotation coordinator, or post-graduate coordinator.
  - b. Recognition for excellence in teaching as documented by:
    1. Active involvement in teaching with student and/or peer evaluations.
    2. Leadership in teaching mentoring and advising students, including awards for teaching effort and/or long-term success in particular teaching assignment.
    3. Development of new teaching materials or curricular initiatives.
    4. Evidence of leadership demonstrated by active participation in postgraduate education, residency programs, fellowship programs or extramural programs.
2. Scholarly Contributions: must satisfy at least three (3) of the 4 criteria:
  - a. Minimum of three (3) co-authored articles (at least second author), in quality peer-reviewed journals since promotion to Associate Professor. One such article may be substituted with being co- investigator on a research grant or contract. Primary author of textbook will be accepted in lieu of one first-author and one co-authored publication. Chapters in textbooks (first, second or senior author) will be accepted in lieu of one co-authored publication.
  - b. Service on journal review panels, editorial boards and/or professional advisory boards or organizations.
- (LSUHSC School of Dentistry - Promotion Policy rev. 9-20-2012 20)
- c. Presentations at regional or national symposia.
- d. Board Certification, Master in Education (M Ed), Master of the Academy of General Dentistry, or additional postgraduate course study.
3. University, Academic, and Professional Service -
  - a. Active membership and participation on university committees and in school activities.
  - b. Leadership in administrative performance at the departmental and school level.

#### **MISS FULL-TIME CLINICAL NON-TENURE TRACK**

##### **A. Faculty Appointment of Instructors**

All full-time appointments at the rank of instructor are by recommendation of the department chair and approved by the dean. Upon approval of an appointment, a copy of the candidate's curriculum vitae is to be distributed to all members of the School of Dentistry Executive Committee for their information.

##### **B. Appointment or Promotion to Assistant Professor of Clinical Discipline**

Normally, promotion will be considered only after the nominee has completed a minimum of two years of post-graduate training or other relevant experience. will be based on recommendation by the department chair and the approval of the Dean. For Dental Laboratory Technology (DLT), a Bachelor of Science Degree in Dental Laboratory Technology and Board Certification (CDT) in one of the five disciplines of Dental Laboratory Technology (written and practical passed) is required.

1. Potential for teaching, advising, and clinical contributions.
2. Willingness to participate in departmental or school committees.
3. Excellence and scholarly approach in patient care.
4. Active enrollment in continuing education and postgraduate education courses.

Promotion or appointment to the rank of Clinical Assistant Professor does not require action of the Appointments, Promotion, and Tenure Committee. Upon approval of an appointment, a copy of the candidate's curriculum vitae is to be distributed to all members of the Executive Committee for their information.

C. Appointment or Promotion to Associate Professor of Clinical Discipline

Promotion to Associate Professor of Clinical Discipline is reserved for faculty members regarded as excellent and scholarly clinicians, often with a local or regional reputation. A minimum of six years of satisfactory service at the Assistant Professor level is a prerequisite in order to be considered for promotion. Advancement to this rank is based upon attainment of the highest appropriate degree in the field (DMD or DDS; in Dental Hygiene, Master's Degree from a fully accredited institution; Bachelor of Science Degree in Dental Laboratory Technology) and upon the following criteria:

1. Teaching: demonstrated excellence in teaching (as documented by the department chair)
2. Scholarly Contributions: at least three of the five following criteria must be fulfilled.
  - a. Minimum of 3 co-authored articles (at least second author), in quality peer-reviewed journals. One such article may be substituted with being co-investigator on a research grant or contract.
  - b. Membership in professional societies.
  - c. Presentations in local, regional, or national symposia.
  - d. Completion of a recognized specialty program or evidence of advancement within the individual's field, e.g. recognized fellowship or board.
  - e. Active enrollment in continuing education and/or postgraduate education courses.
3. University Service
  - a. Active membership in university committees and school activities.
  - b. Evidence of beginning of leadership in administrative performance at the departmental and school level.

D. Appointment or Promotion to Professor of Clinical Discipline

Promotion to Full-time Professor of Clinical Discipline is reserved for exceptional faculty, often those of regional or national recognition. A minimum of 7 years of satisfactory service at the Associate Clinical Professor level is a prerequisite in order to be considered for promotion.

1. Teaching: demonstrated excellence in teaching and patient care (as documented by the department chair).
  - a. Significant directorship of at least two of the following: course director or co-director, or elective course director, rotation coordinator, or postgraduate coordinator.
  - b. Recognition for excellence in teaching as documented by:
    - Active involvement in lecturing to students.
    - Leadership in teaching mentoring and advising students, including awards for teaching effort and/or long-term success in particular teaching assignment.
    - Development of new teaching materials or curricular initiatives.
    - Evidence of leadership demonstrated by active participation in postgraduate education, residency programs, fellowship programs or extramural programs.

2. Scholarly Contributions: must satisfy a. and at least 2 of the 3 other cited criteria.
  - a. Minimum of 3 co-authored articles (at least second author), in quality peer-reviewed journals since promotion to Associate Clinical Professor. One such article may be substituted with being co-investigator on a research grant or contract.
  - b. Service on journal review panels, editorial boards and/or professional advisory boards or organizations.
  - c. Presentations in local, regional, or national symposia.
  - d. Board certification in ADA recognized specialty, Master in Education (M.Ed.), or Fellow of the Academy of General Dentistry, additional postgraduate course study (Dental Hygiene) or one additional CDT (written and practical passed).
3. University Service
  - a. Active membership in university committees and school activities.
  - b. Leadership in administrative performance at the departmental and school level

**OKLA** Our institution has either “tenured,” “tenure track,” or “consecutive term” positions for full-time faculty members. The expected levels or standards for promotion to each academic rank are similar. However, if a faculty member is primarily hired to instruct and supervise students in direct patient care in a clinical setting, they may have different criteria available for the “scholarly activity” requirements for promotion.

**TENN** See response to previous question

**UTHSA** Our University does not have clinical tracks, we have tenured or non-tenured faculty tracks.

**Policy:** The University of Texas System policies concerning the granting of tenure are detailed in the Regents’ Rules and Regulations, Rule 31007. Faculty should read these rules, especially regarding the terminal year of the tenure process. As stated in these Rules, “the maximum period of probationary faculty service in any academic rank or combination of academic ranks shall not be more than nine years of full-time academic service at the health related institutions of the System”. The Regents’ Rules are accessible at <http://www.utsystem.edu/bor/rules.htm>.

The awarding of tenure to a faculty member is recognition by the institution that the faculty member has demonstrated an exceptional degree of professional competence and scholarly achievement, as well as the attitudes and intellectual qualities that make the individual a desirable and continuing member of the faculty. As noted earlier, scholarly achievement refers to original accomplishments in research, teaching, and service that are recognized as outstanding by one’s peers, both within and outside the Health Science Center. The faculty member must demonstrate sustained, superior level of performance in two of three academic activities (teaching, research, and service) consistent with his/her rank, and there should be clear evidence to predict performance at this level for the future.

**Criteria:** Tenure denotes a status of continuing appointment as a member of the faculty of the Health Science Center. Only members of the faculty with the academic titles of Professor, Associate Professor, or Assistant Professor may be granted tenure. Full-time faculty who request appointment as part-time faculty will not be eligible to retain tenure status.

**UTH** Our institution does have clinical tracks, but the minimal expectations are the same.



## V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN

- A. What, if any, are the implications of the following article? Summarize and report the discussion.

*Dental Composite Restorations and Psychosocial Function in Children*. Maserejian Nancy N., Trachtenberg Felicia L., Hauser Russ, McKinlay Sonja, Shrader Peter, Tavares Mary, and Bellinger David C. Pediatrics originally published online July 16, 2012. DOI: 10.1542/peds.2011-3374.  
<http://pediatrics.aappublications.org/content/early/2012/07/11/peds.2011-3374.full.pdf+html>

**BAY** No response submitted

**LSU** No response submitted

**MISS** We could not access this article, but from the abstract, unless the FDA placed a restriction or warning, we don't see any implications at this point. As more evidence comes, that may change. It is a similar argument for mercury in amalgam.

**OKLA** If this study is corroborated by other similar studies, it would indicate that there should be some concern when deciding to use certain resin composite materials for restorations in children in the age range of 6 - 10 years old. Further investigation is indicated for all age groups of patients (This may be ultimately linked to "road rage.")

**TENN** The following information came to us from University of Kentucky from Dr. Richard Mitchell, Biomaterials as a result of a discussion that occurred at the summer SRTA educator's meeting.

At the beginning of their Discussion section the authors summarize their results:

**"These findings indicate that exposure to bisGMA-based dental composite resins may impair psychosocial health in children. With increasing level and duration of exposure to bisGMA-based composite over 5 years of follow-up, children reported more anxiety, depression, social stress, and interpersonal-relation problems, and were more likely to have clinical-range scores for parent reported total problem behaviors. No similar associations were found for amalgam permanent tooth exposure levels."**

I am not qualified to address the particular clinical psychosocial findings, but the authors describe some of their results as "clinically significant" and the size effect as "robust." The data the authors are analyzing are from the NIH-funded New England Children's Amalgam Trial (NECAT) that was conducted 1997-2005. The goal of that trial was to find out whether amalgam restorations had adverse neurological or psychosocial effects on children.

Amalgam restorations had no such effects. Unexpectedly, however, the portion of the control group who received resin composite restorations (those who had permanent teeth restored) instead of compomer restorations (those who had primary teeth restored) exhibited poorer psychosocial outcomes than the other children. The present study correlated exposure data ("surface-years") to the psychosocial outcomes. Interestingly, in the authors' words: **"Associations were stronger with posterior-occlusal (chewing) surfaces, where degradation of composite was more likely."**

The composite used in the trial was Z100 (3M Espe), which is made with BIS-GMA matrix oligomer. The hormone mimicking Bisphenol-A (BPA) is used in the synthesis of BIS-GMA. There may be trace amounts of BPA in dental composites or BPA may be one of the products eluted when composite restorations undergo wear and dissolution in vivo. Serendipitously, the compomer used (Dyract AP, Dentspy-Caulk) was not based on BIS-GMA. It contains, instead, a urethane diacrylate oligomer, which does not contain or release BPA. The observation that composite restorations, but not the compomer restorations, are associated the undesirable psychosocial effects suggests that BPA may be playing a role.

The clinical trial measured all sort of biomarkers for the effects of mercury, but did not measure BPA uptake or other biomarkers related to BPA, so it is not possible to demonstrate causality - something other than BPA may be causing the observed effects. Many, but not all, current resin composite materials are made with the BIS-GMA oligomer. Resin composites which are made with urethane diacrylate oligomers are alternatives that may avoid the problems identified in this article.

Richard J. Mitchell, Ph.D.

Associate Professor

Biomaterials Science

University of Kentucky College of Dentistry

**UTHSA** No response submitted

**UTH** The ending statements of the discussion section of the manuscript perhaps provide the best summary: "Thus, there is no evidence to support that clinicians should systematically remove amalgam in posterior teeth to replace with bisGMA-based composite. Given the potential risks and decreased durability of composite, combined with transient increases in plasma mercury concentrations resulting from amalgam removal, such procedures might carry more risk than benefit. Longitudinal trials are needed to examine modern-day resin-based dental materials for the long-term release of their components and health effects".

B. In the last five years, has your College/School made policy changes that impact/restrict the utilization of amalgam? If yes, what are the changes and the rationale for such changes?

**BAY** No

**LSU** No response submitted

**MISS** No

**OKLA** No response submitted

**TENN** Because the regional exams for licensure no longer require an amalgam to be placed and because pre-clinically we teach placement of composite before placement of amalgam, clinical requirements for amalgams have been reduced (or broadened) to allow placement of either amalgam or composite to "count" towards requirements. However, there has been no restriction concerning the use of amalgam.

**UTHSA** No response submitted

**UTH** No

## VI. REGIONAL CODE AGENDA

*To be established by the respective Region and Regional Director. Please also report on responses to the Regional Agenda by all participants.*

A. Briefly describe your courses in Restorative Dentistry including:

1. Freshman courses / Didactic / Lab
2. Sophomore courses / Didactic / Lab / Clinical
3. Junior level courses / Didactic / Clinical

**BAY** No response submitted

**LSU** No response submitted

**MISS** D1: Dental Morphology and Fundamentals of Occlusion

- didactic course and laboratory course  
Methods 1 (introduction to the dental record)  
Dental Caries 1 Dental Amalgam
- Operative dentistry introduction and dental amalgam course
- Didactic and Laboratory course  
Pain Fear and Anxiety 1 (local anesthesia course)

D2: Esthetic Problems (esthetic direct restorations)

Dental Caries III (onlay and gold course)  
Missing Teeth I (Complete Denture course)  
Missing Teeth II(fixed prosthodontics course)  
Missing Teeth III (Removable partial denture course)  
\*all the above D-2 courses have a didactic and a laboratory course  
Clinical Problem Solving ( Clinical)

D3 : Implant Dentistry (didactic and laboratory course)

Aging 9 (didactic only)  
Missing Teeth VI (didactic and laboratory course)  
Occlusal Disorders (didactic and laboratory course)  
Clinical Dentistry (clinical course for operative, fixed and removable prosthodontics)

**OKLA** We direct two Preclinical Courses as follows:

Preclinical Operative I- 1st year spring semester (Didactic/Lab)

This thirty-two session (twice per week) course is the first restorative preclinical experience for the students. It focuses on the fundamentals of operative procedures. The students complete 36 lab procedure projects, and six procedure examinations. The main source of evaluation of the students' performance during the course is the six procedure examinations. This first course is a Pass/Fail course, with the successful remediation of any failed procedure exam required to pass the course. If a student fails more than three of the procedure exams on the first attempt (regardless of successful remediation), they will be asked to repeat the course.

The course is structured as follows:

Section I: Foundational Information (6 Sessions)

- Nomenclature, Instrument Grasps & Sharpening,
- Operating Field Isolation
- Intro to Adhesive Bonding
- Resin Composite Finishing/Polishing,
- Properties of Resin Composites.

Section II: Pit and Fissure Caries (8 sessions)

- Intro to Pit and Fissure Caries, Preventive Sealant and Preventive Resin Restoration,
- Still teach 7 steps of cavity prep
- Class I Resin Composite
- Class I Amalgam Insertion
- Class I Amalgam Preparation
- Complex Class I Amalgam & Finishing/Polishing Amalgam
- Caries Risk Assessment & Preventive Care Options

Section III: Smooth Surface Caries (18 sessions)

- Intro to Smooth Caries & Class II Amalgam Prep
- Class II Amalgam Insertion & Tofflemire Matrix
- Class II Amalgam Slot Preparation & Treating Defective Restorations
- Class II Resin Composite Insertion
- Class II Resin Composite Preparation (Conventional and Slot Prep)
- Anterior Proximal Caries & Class III Resin Composite
- Class IV Resin Composite Restoration
- Cervical Lesions – Carious and Non-Carious lesions  
(Class V Resin Composite and Resin Modified Glass Ionomer)
- Cervical Lesions – Class V Amalgam restoration

**Preclinical Operative II** - 2nd year fall semester (Didactic/Lab)

This is a 16 session (once per week) course focused on transitioning the students into a clinical setting. This course is graded on a system similar to what is used in our student clinics, which provides a numerical assessment that is converted to a letter grade. The final procedure examination for this course is considered an entrance examination for admission to our student clinics for operative care.

The course curriculum includes:

- Operative Tx. Planning
- Bonded Amalgam Restoration
- Pin Amalgam Restoration
- Pulpal Distress and Pulp Protection/Pulp Cap
- Caries Identification and Excavation
- Temporary Restorative Materials
- Principles of Tooth Whitening
- Case Simulation Projects
- Clinic Orientation

**We offer four “Block Care” operative clinical courses as follows:**

Spring Session – Second Year students – 16 week clinical session

Summer Session – Third Year students – 8 week clinical session

Fall Semester – Third Year students – 16 week clinical session

Spring Semester – Third Year students – 16 week clinical session

In the fourth year, students enter into a “Comprehensive Care Group” clinic. The operative department faculty members no longer oversee or evaluate those students after that point.

**TENN** No response submitted  
**UTHSA** No response submitted  
**UTH** No response submitted

B. When is your first clinical experience in Restorative Dentistry scheduled?

1. Where do the patients come from?
2. Do they stay with the student?
3. What is the staffing ratio?
4. Any problems or recommendations?

**BAY** Spring semester of the D2 year when the students meet their first Removable Prosthodontic patients and their first Periodontics patients requiring only a simple prophylaxis.

1. Patients come from the community at large. They make screening appointments *for evaluation of their needs and are referred to the appropriate undergraduate or graduate program*; patients with needs which are not deemed to be a good teaching case are rejected and referred to private practice.
2. Yes, for the most part the patient is assigned to one student and completes treatment with that student. There are a few exceptions due to procedures which are in short supply; for example, patients requiring multiple endodontic procedures may be treated by an additional student whose patient pool does not include endodontic procedures. Another exception is made for a patient with multiple lesions suitable for a progress exam; since the restoration for an operative progress exam is free to the patient, another student with no suitable progress exam lesions in his/her patient pool may treat another student's patient at no charge as a service or benefit to the patient.
3. It varies from discipline to discipline. In the D3 year, it is approximately 4-5 students per instructor. In the D4 year, it is approximately 7-8 students per instructor.
4. For the most there are no problems. On any given day, the "perfect storm" can occur when we have multiple faculty members out for illness, vacation etc. and we are short staffed with a fully booked clinic.

**LSU** No response submitted

- MISS**
1. The first schedule experience occurs in the summer of their D-3 year. A few students may treat some simple operative patients' needs alone with their d-4 team captain in the spring Semester of their D-2 year. Tuesday mornings D-2 students are scheduled with their d-3 or D-4 team members to help assist. Injections, impressions and simple restorations can be done.
  2. Patients assigned in the summer of the D-3 year remain with the student.
  3. 6:1 or less
  4. No

**OKLA** Our initial restorative course is the “Block Care” operative clinic during the Spring semester of the students’ second year.

1. The patients are assigned to the students by our oral diagnosis department after their initial screening appointment. These are normally patients limited to “non –urgent” simple restorative care needs.
2. The patients stay with their assigned student.
3. For second year students in our clinics, we try to maintain no greater than a 4:1 student to faculty ratio.
4. One problem we sometimes have, is inaccurate screening exams that assign patients who have immediate restorative needs that are well beyond the current abilities of the second year students. In these cases, we try to refer the patient for their immediate needs to fourth year students, and allow the second year student to complete the less complex care.

Another basic problem we have is a lack of patients in general.

**TENN** No response submitted

**UTHSA** No response submitted

**UTH** No response submitted

C. Do you have a clinical course in Operative Dentistry in the Junior or Senior year?

1. How do you assign grades?
2. Do you have Skills Assessments? Are they photographed?
3. Are you evaluating portfolios?
4. Do you have points or procedures requirements?

**BAY** Yes, in the D3 or junior year. In the D4 year, Operative Dentistry is addressed in some lectures given in the Advanced Techniques course.

1. Clinical grades in the D3 year are computed by averaging the grades the student earns on the three clinical progress exams (CI II amalgam, CI II composite and CI III composite).

In the D4 year, the student’s operative progress exam grades and graded operative procedures performed in the Mock Board exam are components of their overall Comprehensive Care grade.

2. In the D3 year, the clinical progress exams are our skills assessments. We have not photographed the progress exam preparations and restorations in the past, but are planning to in the future.

In the D4 year, the clinical progress exams are also used to determine competency. These skill assessments are not photographed.

3. We are not using portfolios in the D3 or D4 program.
4. D3 operative has essential experiences which must be completed. In evaluating students in the Comprehensive Care program of the D3 year, points awarded to each type of procedure (Relative Value or RV points) are counted and monitored by the group leaders and Comp Care director.

In the D4 year, essential experiences and RV points among other measures are used to determine competency.

**LSU** No response submitted

- MISS** 1. D-3 have a clinical orientation where they operate on dentofoms repeating several different restorations over the summer in a clinical setting. This allows them to learn how the clinic operates and prepare to begin treatment on live patients. The Course runs daily over two weeks and has the remainder of the summer session for completion of the exercises.
2. No/No
3. No
4. We have minimal guidelines to qualify to take a competency and an overall goal. If competencies are completed the student is allowed to graduate even if the goals are not attained. We continue to schedule the students to treat their patients comprehensively after the competencies are completed.
- OKLA** Yes, we have three operative dentistry courses for third year students in our “Block Care” clinics.
1. We have a system that combines a point score for the difficulty of the procedure and a numerical score assigned for the procedure that evaluates both the quality of the procedure and the student’s professional conduct during that clinic session.
2. Yes, we have “Competency examinations” for specific operative procedures. They include a Class II amalgam, Class II resin, and Class III resin.
3. No, we do not have a portfolio evaluation system.
4. Yes, we have specific minimum procedure requirements during the “Block Care” clinic in the 2nd and 3rd years. The students are required to complete the required “clinical experiences” and the three competency examinations prior to advancing to the “Comprehensive Care” program in their fourth year.
- TENN** No response submitted
- UTHSA** No response submitted
- UTH** No response submitted
- D.** How are your students trained in anesthesia?
1. Do they anesthetize each other?
2. Do they place rubber dams on each other?
- BAY** Lectures and training in anesthesia are done in the OMS Department. The students will have given various types of injections prior to presenting to the clinic to perform operative or fixed prosthodontic procedures.
1. Yes
2. Yes
- LSU** No response submitted
- MISS** Spring course in the D-1 year students learn how to manage dental pain, fear and anxiety.
1. Yes
2. Yes
- OKLA** Our students receive a lecture series and a one day clinical practice session that covers local anesthesia and Nitrous Oxide analgesia.
1. Students divide up into groups of threes in the clinic, and administer 5-6 different types of local anesthesia injections. This is overseen by one faculty member per group.
2. The students have placed rubber dams on one another in the past. We are not sure that this will continue with our new clinical curriculum.
- TENN** No response submitted
- UTHSA** No response submitted

**UTH** No response submitted

E. How do you teach caries removal in the preclinical labs?

**BAY** Caries simulating typodont teeth and extracted teeth are used. We teach isolation of the caries to the pulpal and axial walls followed by final removal with round burs using the slow speed handpiece and/or spoon excavators.

**LSU** No response submitted

**MISS** There are no hands on teaching of caries removal in preclinical labs. There are exercises on IRM and glass ionomer placement using extracted teeth and caries may be encountered in these procedures but not every experience is the same.

**OKLA** Caries removal is a difficult concept and technique to teach in the pre-clinic setting. We have students bring 4-5 carious extracted teeth to the pre-clinic lab and practice caries removal on them. We spend only one session on this important concept. There probably needs to be more time allocated to this.

**TENN** No response submitted

**UTHSA** No response submitted

**UTH** No response submitted

F. Have you encountered difficulties in the transition from the preclinical labs to the clinic?

**BAY** Since our pre-clinical simulation lab has been in use, our students have had an easier time transitioning to the clinical setting. They are, however, very tentative in caries removal and require careful monitoring and supervision especially early on in the D3 year.

**LSU** No response submitted

**MISS** No significant difficulties in general, most students transition with no problems. We have a low faculty to student ratio that allows close supervision during the summer and fall of the d-3 years as students' transition into clinical dentistry.

**OKLA** Generally we do not experience dramatic difficulties in the transition of our students from pre-clinic to clinic. Initially, the administration of anesthesia and placement of the rubber dam are the biggest obstacles for our new students. As mentioned previously, we attempt to restrict their initial clinic sessions to fairly simple operative procedures. We can run into trouble if a beginning student is allowed to initiate a treatment that involves more difficult procedures that may exceed their level of experience.

**TENN** No response submitted

**UTHSA** No response submitted

**UTH** No response submitted

G. When and where are you using flowable composites (i.e. indications)?

**BAY** We seldom use flowable composites. They are used for sealing some grooves or defects and for some PRRs. At times, flowable composite is used to repair temporaries. Students must have the permission of the supervising faculty member in order to acquire a flowable composite material from the dispensary.

**LSU** No response submitted



- MISS** A) Deep apical proximal boxes in select posterior cases for first layer for apical proximal box adaptation - \*with faculty input only (students need faculty request to check out flowables from supply) . Only a few faculty would allow this under their close supervision.
- B) Margin repair of previously placed composites - defective in isolated areas and deemed repair worthy by faculty – desirable not to have occlusal contacts in the area of repair.
- C) Class V situations- Anterior only, in conservative depth cases with good isolation (not subgingival). A few faculty allow this but not for competency and only with select fourth year students
- OKLA** Flowables are not used frequently in our block care clinics. We use them sometimes in placing Preventive Resin Restorations if the preparation outline is very minimal in width. We do not use a flowable resin as liner for resin composite restorations.
- TENN** No response submitted
- UTHSA** No response submitted
- UTH** No response submitted

H. Which specific flowable composite materials are you using?

- BAY** Dyract (Dentsply)
- LSU** No response submitted
- MISS** Sure fil flow predominantly, also TPH flowable is available.
- OKLA** We utilize Dyract or Utraseal xt plus (which is similar to most “flowable” resins) for our minimally prepared Preventive Resin Restorations
- TENN** No response submitted
- UTHSA** No response submitted
- UTH** No response submitted

I. Is there anything else you think we need to know about the use of flowables at your institution?

- BAY** No
- LSU** No response submitted
- MISS** Students have been using excessive amounts of our flowable composites in repairing or relining bisacryl temporary crowns without getting faculty input. Do other schools have this problem?
- OKLA** Flowable resin composites are not used frequently in our clinics.
- TENN** No response submitted
- UTHSA** No response submitted
- UTH** No response submitted

# **Consortium of Operative Dentistry Educators**

## **(CODE)**



### **REGION IV (GREAT LAKES) ANNUAL REPORT**

Region IV Director:

Dr. Paul Reifeis  
Indiana University  
Indianapolis, IN

Region III Annual Meeting Host:

Dr. Adriana Semprum  
University of Illinois  
Chicago, IL

Region III Annual Report Editor:

Dr. Paul Reifeis

### **CHAPTER 4**

## CODE REGIONAL MEETING REPORT FORM

**REGION** IV (Great Lakes)

### LOCATION AND DATE OF MEETING:

University: University of Illinois

Address: Chicago, IL

Date: November 8 - 9, 2012

### CHAIRPERSON:

Name: Dr. Adriana Semprum

Phone #: 312-996-1811

University: University of Illinois

Fax #: \_\_\_\_\_

Address: Chicago, IL 60612

E-mail: asemprum@uic.edu

**List of Attendees:** Please complete the CODE Regional Attendees Form (following page)

### Suggested Agenda Items for Next Year:

No suggestions submitted

### LOCATION AND DATE OF NEXT REGIONAL MEETING:

Name: Dr. Mike Bagby

Phone #: 304-293-3370

University: West Virginia University

Fax #: \_\_\_\_\_

Address: Morgantown, WV 26506

E-mail: mbagby@hsc.wvu.edu

Date: October 3 4, 2013

Please return all completed enclosures to  
Dr. Larry D. Haisch, National Director, UNMC College of Dentistry;  
40<sup>th</sup> and Holdrege Streets; Lincoln, NE 68583-0740.

**Deadline for return: 30 Days post-meeting**

Office: 402 472-1290 Fax: 402 472-5290 E-mail: lhaisch@unmc.edu

Also send the information on a disk and via e-mail with all attachments.

Please indicate the software program and version utilized for your reports.

CODE Region IV Attendees Form

NAME	UNIVERSITY	PHONE #	FAX #	E-MAIL ADDRESS
Sean Noonan	Pittsburgh	410-746-9145		Sen24@pitt.edu
Paul Reifeis	Indiana	317-278-1858	317-274-2818	pereifei@uipui.edu
Marco Tauil	Detroit Mercy	313-494-6788	313-494-6781	tauilma@udmercy.edu
Brooke Adams	Indiana	317-274-8408		Bnadams2@iupui.edu
Janet Bolina	Ohio State	614-292-3216		Bolina.1@osu.edu
Adriana Semprum	Illinois	312-996-1811		asemprum@uic.edu
Camila Sabatini	SUNY-Buffalo	716-829-6343	716-829-2440	cs252@buffalo.edu
Mike Bagby	West Virginia	304-293-3370		mbagby@hsc.wvu.edu
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Marsha Babka	Midwestern	630-515-6171		mbabka@midwestern.edu

**2012 NATIONAL CODE AGENDA  
REGION IV  
SUMMARY RESPONSES TO NATIONAL AGENDA**

**(Editor Note: Questions condensed for printing purposes)**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

**I. MILLENNIAL IMPACT**

**Classroom/Didactic Experiences**

Most schools have undertaken some form of curriculum reform in the past decade (small group learning, fewer formal lectures, etc.) However, two schools state no changes in delivery during that period. Schools are about evenly divided as to the reason for changes during the ten year period. Several stated changes but had no student driven reason for the changes, while other did attribute change to the wants and desires of the present day student. Examples of reasons given are available technology, increase in the size of the curriculum and convenience of the faculty.

**Pre-Clinical Laboratory Experiences**

All, except one school, indicated that they have moved to more modern and realistic simulators in the past decade. Generally these simulators include cheek, head shapes, water, etc. rather than just “Dentoform on a pole.” No school pointed to any specific change due to the current student population. Virtually all changes were due to other reasons rather than current student characteristics.

**Clinical Experiences**

Changes have included credit for experiences rather than only restorations, replacement of discipline clinics, comprehensive care group clinics, and competency based concerns. Two schools indicated no changes. Half of the schools polled indicated that changes to the clinics system were in response to the needs of the current students. Half did not indicate a student driven reason. Most schools indicated that there were no changes based or not based on the student population. However two changes were students working in teams and non-discipline based faculty.

**II. DIGITAL DENTISTRY**

All schools reporting have incorporated some form of digital dentistry. Most schools named Sirona products but others names included E4D and Lava. Experiences have been good with one school reporting problems with digital radiography quality. Schools are generally using introductory digital technologies in the undergrad programs with some more than others. Schools were relatively uncertain as to the effect on income. Partly due to the up-front outlay of funds and the small amount of time the technologies have been available. All schools train several people in the technology but not necessarily all interested faculty. All schools indicated an augmentation of current techniques. All schools indicate that the response is positive, some very positive. About half the schools make digital impression, half do not. One school does both. Generally the answer to time is not due to time, but the lack of faculty supervision. Clinic sessions are between 2.5 and

3.5 hours in length.

### **III. RESTORATIVE DENTISTRY**

All schools indicate that they intend to teach the same procedures and techniques in the pre-clinical courses as in the clinics. With few exceptions, the same materials and instruments are used in pre-clinic and clinic. It appears that each school has a school committee or a departmental committee that coordinates and oversees materials and procedures. All schools use different manufacturers of polishing systems, but that all consist of burs, points and abrasives. No school teaches a bulk fill composite technique. Generally it takes up to over a year to implement material changes to lab and/or clinic. Orders for supplies in the pre-clinic, for example, are decided upon 6 - 9 months in advance.

### **IV. SCHOLASTIC**

All of these questions are difficult to summarize. Each school separates clinical from non-clinical in some fashion but the standards for each level have some variation from school to school. One school recognizes that clinical faculty do not need refereed publications but all others still expect it.

### **V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

Implications include the question of further use of certain resins in children. But with amalgam also in disrepute, the practitioners are left with few options. All the schools agreed that the article was interesting but did not contain enough hard information to force any significant changes in how treatment is delivered clinically. Although schools are placing fewer amalgams than 10 years ago, no formal changes in policy has occurred at any of the schools.

### **VI. REGIONAL CODE AGENDA**

## 2012 NATIONAL CODE AGENDA

### REGION IV RESPONSES

*(Evidence cited where applicable)*

November 8 - 9, 2012

#### Region IV School Abbreviations

CWRU	Case Western Reserve University	OSU	Ohio State University
UDM	University of Detroit Mercy	PITT	University of Pittsburgh
UIC	University of Illinois - Chicago	SUNY	State University of NY - Buffalo
IND	Indiana University	WVU	West Virginia University
MICH	University of Michigan	UWO	University of Western Ontario
MID	Midwestern University		

#### GENERATION Y/MILLENNIAL DENTAL STUDENTS

##### Background:

During a recent ADEA (American Dental Education Association) board meeting in Washington, D.C., 40 millennial dental students discussed their perceived strengths and weaknesses and other trends to shed light on how schools can provide better dental education. Millennials are those students born between 1979 and 1994. The dental students said they use technology constantly to access information, conduct business and stay in touch, and that the Internet, text messaging, digital music, and downloads were all vital to their lives. The students expressed a preference for the ease of use of technology, but wanted to ensure that personal interaction remained a key part of their learning experiences. Many students indicated that their best academic experiences were those that involved a great deal of hands-on learning and allowed them to study in a group setting. The students also felt strongly that the best professors were those who care whether students were learning class materials, rather than just memorizing them, and those who made themselves available for help when necessary.

##### Millennial Generation (Generation Y):

1. **Definition:** a term used to refer to the generation, born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.
2. **Common Traits:**
  - **Tech-Savvy:** Generation Y grew up with technology and rely on it to perform their jobs better. Armed with BlackBerrys, laptops, cellphones, and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through e-mail and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations.
  - **Family-Centric:** The fast-track has lost much of its appeal for Generation Y who is willing to trade high pay for fewer billable hours, flexible schedules and a better work/life balance. While older generation s may view this attitude as narcissistic or lacking commitment, discipline and drive, Generation Y have a different vision of workplace expectations and prioritize family over work.
  - **Achievement-Oriented:** Nurtured and pampered by parents who did not want to make the mistakes of the previous generation, Generation Y is confident, ambitious, and achievement-oriented. They have high expectations of their employers, seek out new challenges and are not afraid to question authority. Generation Y wants meaningful work and a solid learning curve.
  - **Team-oriented:** As children, Generation Y participated in team sports play groups, and other group activities. They value teamwork and seek the input and affirmation of others. Part of a no-person-left-behind generation, Generation Y is loyal, committed and wants to be included and involved.
  - **Attention-Craving:** Generation Y craves attention in the forms of feedback and guidance. They appreciate being kept in the loop and seek frequent praise and reassurance. Generation Y may benefit greatly from mentors who can help guide and develop their young career.

## **I. MILLENNIAL IMPACT**

### **A. Classroom/Didactic Experiences**

1. Has the way your department teaches the didactic component of restorative dentistry theory or concepts changed significantly in the last 10-12 years? (e.g. traditional class lectures replaced with small group discussion session, or most of the didactic curriculum is delivered on-line).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**CWRU** No response submitted

**UDM** No. However, we use electronic resources such as Blackboard to post grades, lectures, and PowerPoint presentation. We use Camtasia to record lectures so students can access them at a later time. We are also in the process of obtaining e-books for the upcoming classes. Available technology and a dedicated IT person.

**UIC** We are currently in the second year of a major curriculum revision leading to a DMD degree. This replaces our former DDS curriculum. The following is a brief summary, for background regarding this major curriculum change (from the UIC College of Dentistry web site):

The traditional "2 x 2" structure in which students study foundational knowledge in the first two years and receive clinical practice in the second two years will be replaced by comprehensive care courses that integrate foundational learning and clinical learning throughout the four-year program. The purpose of the revision is to improve retention and application of learning, and to better achieve long-stated goals to graduate oral health professionals with strong competencies in health promotion and disease prevention, diagnosis, evidence-based practice, communication, collaboration, and community engagement. This revision builds on the COD's recent consolidation (through formal course revision processes) of a number of discipline-based courses into a series of 11 comprehensive care courses (Comp Care Ia thru IVc). Patient scenarios that place all learning in the context of dental practice will prompt interdisciplinary learning. Scenarios will emphasize the relationship between systemic and oral diseases, health and prevention, family and community context, disease diagnosis and evidence based practice.

A central feature of the DMD curriculum will be small group discussions of patient scenarios. In addition to acquiring content knowledge, the goals of small group discussion are to develop students' capacity to find and apply relevant information to clinical cases, foster higher-order reasoning skills, promote accurate self-assessment and a sense of responsibility for one's own learning, and build effective communication and collaboration skills.



There has been a significant shift in the DMD curriculum at UIC away from traditional lectures. Since the newly implemented curriculum has a focus on active learning, there has been an effort to make all classroom sessions interactive and to encourage student participation. One change that is directly related to this philosophy is that a new learning facility, the learn lab, was created. This classroom is laid out to facilitate small group activities and to integrated advanced technology into the sessions. This learning facility can accommodate half of a class per session and most often there is a subdivision to small groups of approximately 8 students per group.

When the entire class (current class size is 68 students) meets in a larger “lecture hall setting” there is still a focused effort to encourage student participation. One method used involves use of Turning Point Technologies software and a student response system (clickers). All students are issued these devices and this allows immediate feedback regarding concepts that are discussed in a session. This allows the instructor to obtain periodic confirmation during a session that concepts are well understood. In restorative dentistry sessions, preceding clinic activities, we have found that this method works particularly well to engage students in discussion of restorative criteria that are used for self-assessment in clinic sessions.

It is likely that awareness of generational attitude changes and perceived behaviors influences general teaching / learning philosophies. However, during curriculum revision planning at UIC, there was very little discussion regarding change specifically to address the changes in student characteristics. The changes were motivated by a perceived need to improve learning outcomes based on a wider study of educational literature. There was a perception that providing greater clinical relevance to our teaching throughout the four years could enhance the curriculum. There was a belief that a separation existed where various departments were not well aware of all that was or was not taught within other departmental courses. Content was not always introduced in a manner that demonstrated proper integration between disciplines. The curriculum revision was an opportunity to correct possible deficiencies in existing curriculum and to make the entire learning process more students centered and interactive.

**IND** Generally there has been a subtle shift toward on-line lectures especially those that involve rote information only. Most lectures are recorded (PodCast etc.) for student viewing later. The Dean at UI has formed a committee to determine if more course material and maybe entire courses can be placed on a digital medium only. Hand skill and laboratory lectures are still in person with required attendance. Students continually ask for more and different ways of viewing and learning material. We are not certain; however, how many students actually view some of our resources that we take great pains to create. Some changes such as omitting a lecture in favor of a digital presentation are for the faculty’s convenience only. Fewer lectures means more laboratory time for pre-clinical courses.

**MICH** No response submitted

- MID** We use small group discussions for evidence based research methodology, critical analysis sessions, and in teaching new technology. All lectures are on Blackboard along with instructional videos. Students work in teams for oral health promotion presentations. Guided study and experience sessions allow students to make decisions about their individual needs for achievement. Guided study and experience sessions are one day a week. Students prepare a learning contract in advance which outlines their goals and resources needed. After the session, they report on their success in achieving their goals. The use of small group sessions and on-line material is in response to millennial learning style - to reduce the amount of time spent in traditional lectures, and to promote a collaborative team approach to learning. The philosophy of the college is to emphasize critical thinking and integrated learning. Since there is a small student to faculty ratio, small group discussions is the preferred method of delivering information and directly mentor the students as they progress through the curriculum.
- OSU** No response submitted
- PITT** No significant changes in the last 10 to 12 years to the way students are taught restorative dentistry in the classroom, pre-clinical laboratory or clinic.
- UB** We have an electronic course management system whereby students have access to electronic handouts, videos and PowerPoint presentations. Use of electronic textbooks, on-line quizzes and self-evaluation forms are also in use. Students are more electronic in their learning and wish to decrease lectures and do more learning in small groups. The increasing size of the curriculum hours necessitates more outside learning.
- WVU** No, we use mostly traditional experiences. We do post notes, handouts, and schedules in a website. We do have a “team leader” that helps the students manage their family of patients and address weaknesses in patient care.
- WO** No response submitted

## **B. Pre-Clinical Laboratory Experiences**

1. Has the way your department teaches the pre-clinical laboratory component of restorative dentistry theory or concept changed significantly in the last 10-12 years? (e.g. traditional work benches replaced with high tech manikin labs or significant use of patient simulators, like DentSim).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**CWRU** No response submitted

**UDM** In 1997, we remodeled our labs and acquired manikins (ADEC). We currently have 100 manikins in our simulation lab. The main reason for change is that we built a new dental school in the year 1997.

- UIC** The philosophy for effective pre-patient care learning has been focused on a move away from laboratory benches and towards a realistic clinical learning environment. For the past ten years we have transitioned towards the use of manikin heads mounted on actual patient chairs / dental units or to teaching pre-patient care activities in the same group clinics where patient care occurs. The current status is that all partnering activities where students learn by practicing various procedures (intra- and extra-oral examinations, making alginate impressions, pulpal evaluation, occlusal assessment, etc.) with a partner student are conducted in the patient care clinics. Some manikin activities are also conducted in patient care clinics with manikins mounted on dental chairs. All remaining dentech activities are conducted in two pre-patient care facilities, one that utilized manikins mounted on dental units and the second that utilizes manikins mounted on dental simulators. We have evaluated but not elected to use the DentSim system. As with the first question, none of these decisions were specifically based on generational differences. Pre-patient care methods were determined by a belief that our system (learning and practicing in the same or very similar environment to patient care clinics) allows a more seamless transition to patient care.
- IND** Fewer lectures, more emphasis on tooth-colored restorations including CAD/CAM. More digital presentations (Podcasts, etc.). Although students ask for a variety of resources, we only make changes based upon what is best for the student.
- MICH** No response submitted
- MID** We use Kavo manikins to simulate clinical procedures. All procedures are presented in the context of a patient. The simulated patient record is in Axiom. Patient histories are updated, along with procedure completion and treatment notes entered to provide an experience as close as possible to a clinical situation. Newer technology is introduced to students in the sim clinic so that students will have a seamless transition to patient treatment utilizing the latest technology. The philosophy is for students to learn basic sciences and clinical sciences in an integrated format within the context of a patient family (as opposed to isolated procedures in a sim lab setting).
- OSU** No response submitted
- PITT** No significant changes in the last 10 to 12 years to the way students are taught restorative dentistry in the classroom, pre-clinical laboratory or clinic.
- UB** Yes. The teaching of pre-clinic changed from traditional work benches to the use of the simulation clinic where our students are able to work in patient simulated position in a clinical environment with the use of water and high speed suction. We are also looking/evaluating the possibility of acquiring DentSim simulators as adjunct teaching aids for pre-clinical courses. The introduction of the simulation clinic had to do with restricting some logistics with clinic. As a result, the entire second floor clinic was available to second year students on Tuesdays and Thursdays for simulation. Today, we also have less specialized faculty teaching (i.e., too many faculty supervising Operative when they perhaps shouldn't).
- WVU** Yes, we have new manikins from Kavo. They result in cheeks and a tongue, use of high speed with water, more space in between students.
- WO** No response submitted

### C. Clinical Experiences

1. Has the way your department conducts clinical teaching of restorative dentistry changed significantly in the last 10-12 years? (e.g. discipline clinics replaces by general dentistry clinics, traditional clinical requirements abandoned for “activity points”)
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990’s.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school’s leaders or curriculum).

**CWRU** No response submitted

**UDM** No.

**UIC** More than ten years ago, UIC College of Dentistry abandoned a requirement based clinical education system. We also changed away from separate D3 and D4 clinics to form three small comprehensive care group practices. In these groups D3’s D4’s and IDDP doctors have been blended. As mentioned previously, a significant portion of pre-patient care education also occurs in these group clinics. D1 students are assigned to a group practice as they begin the curriculum and in general they remain in the same group practice throughout the four years. Much of the specialty care, such as simple extractions and endodontic treatment, occurs in these practices along with general dental care. Again these decisions are based on a belief that this practice model prepares students best for beginning general dental practice following graduation and not on a belief that these models favor generation Y students.

*REFERENCES: The Dental Curriculum at North American Dental Institutions in 2002-03: A Survey of Current Structure, Recent Innovations, and Planned Changes. Denise K. Kassebaum, D.D.S., M.S.; William D. Hendricson, M.A., M.S.; Thomas Taft, Ph.D.; N. Karl Haden, Ph.D.*

**IND** Currently we are running Comprehensive Care clinics where students stay with a certain director for the entire clinical experience. However, the Dean may make a change to discipline clinics in the near future. We also have made a change to give “points” for every patient session regardless of what type of treatment is accomplished. All changes have been made based on what is best for the student.

**MICH** No response submitted

**MID** All disciplines are presented by content experts; however the group faculties are general dentists. Preclinical courses are integrated general dentistry courses. There will be no clinical requirements. Students will be evaluated on individual independent clinical performance and competencies. Professionalism will be an important component of all clinical and preclinical assessments. Students will assist each other and provide patient care in general dentistry clinics. The group practice leaders will be general dentists. This approach is team oriented and will allow the group faculty to provide mentoring and frequent feedback. This will prepare the students to work as a member in the health care team. Working in teams with students assisting each other will allow students to see more patients, gain more experience and possibly increase clinical productivity. Interprofessional education and practice is also fostered in such an environment.

- OSU** No response submitted
- PITT** No significant changes in the last 10 to 12 years to the way students are taught restorative dentistry in the classroom, pre-clinical laboratory or clinic.
- UB** Yes. In 2002, UB had discipline-based clinics for all restorative disciplines. Today at UB, we have a comprehensive care clinic system for restorative dentistry. We use a combination of “traditional requirements” and “activity points”. For graduation, the student must have a minimum number of Clinical Productivity Units (CPUs) as well as having met a number of discipline-based requirements to make sure that the student is competent. In our comprehensive care clinic, a student has to meet a minimum number of requirements (i.e. to take an amalgam CPE, the student must have completed 12 teeth including at least 2 Class II amalgam restorations) prior to taking individual CPEs (Clinical Practical Examinations) in order to determine competency in that area. Today, we also have less specialized faculty teaching (i.e., too many faculty supervising Operative when they perhaps shouldn’t).
- WVU** Competency based system has replaced procedure based system. Much less work and clinical experiences have resulted. Some students think they are owed a good evaluation if they show up. These students also want someone to tell them what to do rather than make their own decisions. The stars still shine in spite of the system.
- WO** No response submitted

## **II. DIGITAL DENTISTRY**

- A. Has your school incorporated digital dentistry as impression taking, model formation, CAD-CAM, etc.?
- B. Which technologies are you using? Please name the brands.
- C. What have been your experiences with these technologies?
- D. To what degree are they used in the teaching program?
- E. Has this technology had a positive or negative impact on clinic income?
- F. Are all interested faculty trained or is there a specific “digital guru”?
- G. Has it replaced conventional techniques or does it augment conventional techniques?
- H. What is the response from the students?
- J. Are intraoral digital impressions taken or conventional impressions which are scanned afterwards?
- K. Do the students realistically have enough time to totally complete a restoration from preparation to cementation in a single appointment (morning or afternoon session)?
- L. Please indicate the time length of a morning or afternoon clinic session.

**CWRU** No response submitted

- UDM** Yes. We use Lava COS 3M and CEREC. We have had some of our clinic floor faculty attend different sessions for training. Faculty are getting more and more involved with this type of technology. Digital dentistry is taught in pre-clinical courses for second year dental students in the pre-clinical fixed prosthodontics courses. Impact is being reviewed at this time. Many faculty members have been trained but there are certainly some that are better with that technology. This technology augments conventional techniques. Students have a favorable response. They like the technology. We process intraoral digital impressions. Some of the students do have enough time depending on the complexity of the preparation. Our sessions are 3 hours.
- UIC** Digital dentistry has been incorporated heavily in the implant curriculum where students get experience with Procera scanner to design custom abutments for single tooth implant restorations. Also, surgical guides are fabricated for guides surgery from CT scans in the post-graduate level. Orthodontics is using CT images for diagnosis and treatment planning as well. In CAD/CAM technology, currently UIC is exposed in the didactic level but not hands-on. We use Procera, Atlantis, Facilitate, and Surgiguide. So far, very positive with all the technologies mentioned above. Not as much as we would like to, due to the time constrain with each student. Clinically, it has been a positive impact where students get experience learning from the latest technology. As mentioned earlier, time can be challenging due to the large class size. So far, it has been limited to certain faculty. Once the technology is adopted into all clinics, there would be more training sessions for faculty. In implants, it replaced the conventional technique. Not for other technologies yet. Students are always asking for more technologies and hands- on experience with the newest technology. We process only conventional impressions. Yes, a student can completely prepare a tooth for an indirect restoration and fabricate and cement a provisional restoration in one clinic session. The time length is 2.5 hours from 10:00 AM to 12:30 PM, and 2:00 PM to 4:30 PM. Faculty expect students to arrive 30 minutes earlier to prepare for clinic session.
- IND** Yes, within the last 18 months we have incorporated CAD/CAM technology into the pre-clinical and clinical areas. We use E4D (D4D Technologies). Very favorable experiences. Learning curve but we are steadily feeling more comfortable. We have introduced the system to 3<sup>rd</sup> and 4<sup>th</sup> year students. All have had minimal training but most are very interested in using it before graduation. Also 1<sup>st</sup> and 2<sup>nd</sup> years are prepping, designing, milling and cementing one posterior and one anterior restoration before they enter the clinics. No sure of impact. Obviously, a big initial outlay, but we are cutting down certainly on our laboratory expenses. We have trained 5 faculty to be “go to” people for designing and milling. Clinical faculty oversee the preparations. This technology augments conventional techniques. No replacement thoughts at this time. Students are generally very favorable. They always enjoy something new. They also like that they have more control over the restorative process. We usually require impressions that are mounted and then scanned later. We may do more clinical scanning as we improve our abilities. We doubt the student has enough time. Maybe a second semester 4<sup>th</sup> year that has had considerable experience will be able to complete in one session. At this time, it takes 2 appointments to restore. Sessions: AM - 3 hours; PM - 3.5 hours.
- MICH** No response submitted

**MID** CAD/CAM is a part of the pre-clinical courses. We use Sirona CEREC. Experiences have been good; easy to incorporate into the curriculum. Each student has a rotation to use CAD/CAM, mill and polish a crown. Students are assigned in groups of 8 in one half-day session. The students take the images, design and mill the crown. At a subsequent session, students adjust and polish the crown. Impact, not available. This is in pre-clinic only. CDMI clinic is not open yet. All full-time faculty were trained in CAD/CAM. Three designated faculty are responsible for the sessions with the students. The expectation is that all faculty will be trained and calibrated in these technologies. This technology augments conventional techniques, does not replace them. The response from students is overwhelming positive and students are eager to use these technologies in the clinic. We process digital impressions. Don't know yet as to time - so far the CAD/CAM has been used in pre-clinic only. 3.5 hours in the AM; 4 hours in the PM (pre-clinical). 3 sessions of 2.15 hours (clinic).

**OSU** No response submitted

**PITT** The dental school is in the infant stages of incorporating digital dentistry in the clinical setting. In the summer of 2012, the Prosthodontic Faculty was trained in using the Sirona's CEREC digital dentistry technology. For the fall semester 2012, the graduate prosthodontic residents will be trained as well. It is projected that the digital technology will augment conventional techniques and it is yet to be determined how this will impact clinic outcome. So far the training has had a positive impact on the prosthodontic residents who are not intimidated by the technology. It is projected that the residents will use the technology to treat patients in the spring semester of 2013. The use of intraoral digital impressions vs. conventional impressions which are scanned afterwards will most likely be determined on a case by case basis. The digital dentistry technology is projected to be introduced to the 4th year undergraduate dental student as a selective for the fall 2013 or spring 2014 semester. The Prosthodontic Department is hopeful that the prosthodontic residents will complete a restoration from preparation to cementation in one 4 hour AM or PM session, however it is yet to be determined if a undergraduate dental student would be able to complete a restoration in one 3 ½ hour AM or PM session.

**UB** Yes, very limited basis. Only a handful of pre-doc students have exposure on their patients. PG Prod and AEGD have some experience as well, but not all residents look for opportunities to use it. We use CEREC. We do have a Procera Scanner for implant abutments. Extended learning curve; typically need to demo scanning process to student, rather than have student scan intraorally. CEREC is covered didactically in pre-clinic. We have a goal to incorporate it in pre-doc clinic with select students (pros-minors). Impact unknown. Some faculty are already trained. NO formal training offered. This technology augments conventional techniques. The students are interested in technology. Very difficult to learn with limited experience. We use both; however scanning models are preferred for teaching purposes. Typically students need 2 visits to complete restoration. 3 hours for prep, scan, and temp OR prep, impression, and temp.

- WVU** Digital radiographs throughout the school, CAD/CAM but no in the undergrad curriculum. We use Sirona CEREC. Digital radiographs have been a problem with quality and caries diagnosis. Used in clinic only. Radiographs are now available at any work station but quality is a problem. We have a radiologist, but the electronic chart is not supported by a faculty expert. We use digital radiographs only, the students don't know any different. No scanned impressions unless scanned by a lab. In my opinion, the students do not have enough time due to our student/faculty ratio. Sessions are 3 hours both.
- WO** No response submitted

### **III. RESTORATIVE DENTISTRY**

#### **A. Are operative procedures in the clinics done the same way as taught in pre-clinics?**

- CWRU** No response submitted
- UDM** Yes, as much as possible.
- UIC** Most of the time we have consistency with procedures taught in pre-patient care and patient care. The restorative department has written a philosophy document that must be read and signed by all faculty teaching in pre-patient care and patient care to assure standardization of all restorative procedures. Pre-patient care faculty and patient care faculty do collaborate to create clinical assessment criteria for the performance assessment of operative procedures. There are some instances where faculty instruct the use of different instrumentation and material in the clinics, but efforts made by the Dental Materials Advisory Committee have reduced this. Sometimes, materials and instruments are piloted in pre-patient care clinics prior to implementation in the clinics and vice-a-versa. These piloted programs are usually followed with student survey evaluation.
- IND** Yes, as much as possible. That is the intent.
- MICH** No response submitted
- MID** The philosophy is to teach the same procedures and the same methods.
- OSU** No response submitted
- PITT** The operative procedures, dental materials, instruments and burs taught in the pre-clinic remain the same in the clinics. Polishing composites are taught by first using Premier Dental composite finishing burs and/or Brasseler polishing disks, followed by Dentsply prisma gloss with the Enhance polishing cups, disks or cones. Presently, no bulk fill composite techniques are taught. If new materials or new techniques have been approved for incorporation into the curriculum, it usually takes the following year to be incorporated into the pre-clinical labs to the 1st year dental student class. It would take 2 years after to be incorporated into clinics keeping consistent with the dental class that was first introduced to the new material and/or new technique.
- UB** We have a "Direct restorative dentistry committee" which include participation of pre-clinical and clinical discipline directors. Decisions regarding techniques and materials that will be taught at the school are made and implemented in the pre-clinic first. Faculty in-services are provided to standardize faculty, and clinical faculty are starting to adhere to more conservative techniques that are taught in pre-clinic.
- WVU** Yes.
- WO** No response submitted



B. Are the same materials, instruments and burs used?

- CWRU** No response submitted  
**UDM** Yes, with the following exceptions:  
(a) Speejectors/Svedopters are used occasionally in the clinic but are not taught in the pre-clinics.  
(b) Amalgambond is used in the clinic but is not taught in the pre-clinics.  
**UIC** Yes, we standardize the use of instruments and materials through a Dental Materials Advisory Committee for both pre patient care and patient care activities.  
**IND** Yes, we have a committee that oversees instruments and supplies in both clinical and preclinical settings.  
**MICH** No response submitted  
**MID** The same materials and instruments will be used in both pre-clinical and clinics.  
**OSU** No response submitted  
**PITT** See response to III a.  
**UB** For the most part, materials and instruments used in pre-clinic and in the clinic are the same.  
**WVU** Yes.  
**WO** No response submitted

C. If there are differences, how are they reconciled?

- CWRU** No response submitted  
**UDM** (a) The differences are reconciled because Speejectors are too difficult to place on a manikin in the pre-clinic, and there is no good way for the students to have any hands-on experience with them. Also, I don't want to confuse the students by introducing Speejectors to them so early in the curriculum  
(b) Amalgambond is too expensive to be used in the pre-clinics. Also, the topic of "bonded" restorations is not covered in the curriculum until the term after the amalgam course is taught  
**UIC** New materials must first be considered by the Dental Materials Advisory Committee prior to their use with students. The committee then will approve or deny the request.  
**IND** The Instrument and Supply Committee generally addresses concerns as they arise. Alternatively, the Director of Clinics will voice a decision.  
**MICH** No response submitted  
**MID** No applicable as there is no clinic yet.  
**OSU** No response submitted  
**PITT** See response to III a.  
**UB** Discussion among faculty.  
**WVU** No response submitted  
**WO** No response submitted

D. What methods/systems are taught for polishing composites?

- CWRU** No response submitted

- UDM** We use Jiffy Polishers (Ultradent) cups, disks, and points. We also use Supersnap (Shofu) disks, and Prisma Gloss (Dentsply).
- UIC** We use the Cosmedent polishing system which consists of 4 different grit (gray, blue, yellow and pink) of aluminum oxide polishing discs, aluminum oxide polishing strips, buffs and a polishing paste called Enamelize. We also use ONE GLOSS points. Students also have a kit of finishing and polishing burs which contains a variety of fine diamond burs, different shapes of multifluted burs and a diamond impregnated brush.
- IND** We use Soflex discs, Shofu adhesives, and Brasseler fine diamonds.
- MICH** No response submitted
- MID** Composites are contoured with finishing burs (8, 12, 16 and 30 bladed Brasseler burs), Brasseler or Shofu polishing discs and/or Brasseler diacomp polishing points.
- OSU** No response submitted
- PITT** See response to III a.
- UB** We are currently using the Astropol and Astrobrush system from Ivoclar.
- WVU** Ultradent points.
- WO** No response submitted

E. Are any bulk fill composite techniques taught? If yes, please describe.

- CWRU** No response submitted
- UDM** We do not teach bulk fill composite techniques.
- UIC** No, all incremental technique.
- IND** Not for restorative resins. We do bulk fill self-cure and dual-cure resins such as Core-Restore.
- MICH** No response submitted
- MID** No.
- OSU** No response submitted
- PITT** No response submitted
- UB** No bulk fill techniques are currently being taught; nor has it been discussed incorporating bulk fill techniques to our curriculum. There is, however, ongoing research taking place at the department investigating curing efficiency of different bulk fill systems currently available.
- WVU** We use Sonicfill.
- WO** No response submitted

F. Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? What about new techniques – how long to implement into pre-clinic labs and clinics?

- CWRU** No response submitted
- UDM** As soon as practical. The next time the appropriate class is taught.
- UIC** The Dental Materials Advisory Committee comprised by faculty from different departments makes a recommendation. The material is first implemented in the pre-clinic so the student arrives in clinic already familiarized with the material. Once approved it takes approximately 6 months to adopt the new material. It takes another 6 months to make a decision to introduce/change a material. Our criteria for introducing or changing a dental material is based on best evidence based decision, handling at a University setting (control of cross contamination) and costs.

- IND** Pre-Clinical change comes as soon as we can incorporate the change into the pre-clinical courses. Sometimes a few months to over a year. Clinical change can be faster but usually is not.
- MICH** No response submitted
- MID** Not applicable, no clinic yet.
- OSU** No response submitted
- PITT** See response to III a.
- UB** It takes a number of months before newly approved materials and techniques can be incorporated into the curriculum.
- WVU** Materials: weeks to months. Techniques: months to semesters.
- WO** No response submitted

#### IV. SCHOLASTIC

##### A. What is considered scholarly activity at your institution?

- CWRU** No response submitted
- UDM** We sometimes refer to scholarly activity as “Scholarship”. “Scholarship” is considered to include the creation of new knowledge, the critical examination of existing information and/or the synthesis of existing bodies of knowledge, and peer-reviewed presentation of such efforts. Documentation of scholarship may include: Articles representing the conduct of original research in the field of dentistry, dental education, or related areas; Treatise and review articles; Books, book chapters, and monographs; Case reports or case reviews; Abstracts; External grant/contract applications approved and/or funded; Original computer programs applicable to dental research or dental education; Research mentoring of faculty colleagues and/or students.
- UIC** Scholarship for Clinical non-tenure track (NT-CT track) is looked at in its very broadest sense. It includes any scholarly activity related to the primary teaching responsibility such as videos, course manuals, class recordings, etc. Classical scholarship activities such as peer reviewed publications and grants also apply, but are not mandated for promotion on NT-CT track. For tenure track, scholarship is taken in its more classical sense. Scholar activities such as peer reviewed publications, grants, etc.
- IND** Difficult to define. We have so few people promoted. But published articles in peer reviewed journals is foremost for those on tenure track (at this time no one). Clinical track is likely a looser requirement.
- MICH** No response submitted
- MID** Scholarly activities include: grant proposals, manuscript publication, presentations, invited talks and collaborative efforts.
- OSU** No response submitted
- PITT** See response to next section.
- UB** There are two overlapping sub-categories, namely Academic Researcher and Academic Clinician. As per description of our Guidelines for tenure and promotion, creative scholarship for the Academic Researcher is represented by the acquisition and dissemination of new knowledge dealing with fundamental clinical, biological, physical, behavioral, educational, or health policy issues. For the Academic Clinician, creative scholarship entails the acquisition and dissemination of new knowledge or insights in applied clinical, educational or health policy issues.

**WVU** See response to next section.

**WO** No response submitted

B. What are the expected standards for Assistant, Associate, and Full Professors?

**CWRU** No response submitted

**UDM** Assistant Professor: The candidate must possess an interest in and ability to conduct research and creative activities.

Clinical Assistant Professor: There is no requirement for scholarly activity.

Associate Professor: The candidate must present evidence of documented research and creative activities of significance.

Clinical Associate Professor: There is no requirement for scholarly activity.

Full Professor: The candidate must present evidence of outstanding creative scholarly performance and national recognition of independent research as principal investigator. Also documented evidence of external grant/contract approval.

Clinical Professor: There is no requirement for scholarly activity.

**UIC** Faculty of the College of Dentistry are normally in one of the following tracks: **Academic (Research or Clinical), Clinical, and Adjunct**. The criteria and procedures applicable to the appointment and promotion of faculty in the University of Illinois at Chicago are compiled in 4 categories: contributions in **research** (publications, presentations, seminars, training of graduate students among others); **teaching and service** (administration, student advisors, patient care, etc.). The following standards apply to Academic research track position:

1) First appointment, tenure track: It is anticipated that an initial appointment in this track would be at the level of Assistant Professor, in the tenure track. The norms for appointment as Assistant Professor, tenure track, would include:

- a record of peer-reviewed publications;
- the potential for, or the possession of, research funding; and
- some evidence of, or potential for, teaching at undergraduate and/or graduate level.

Ordinarily, a Ph.D. degree would be essential for appointment to this track, but a clinically qualified person with an MD or DDS would also be considered for appointment if their potential was evident and they fulfilled the norms outlined above. .

2) Promotion to Associate Professor with tenure

The person who is to be promoted should have achieved the following norms within the first 5 years of the probationary period as Assistant Professor given the present system of mentorship and progress interviews:

- continued growth in peer reviewed publications, which may include reviews and book chapters;
- obtain research funding, preferably from federal but also including non-federal sources, to support a nationally recognized research program; and
- demonstrated evidence of excellence in teaching
- invited seminars at outside institutions;
- participation in scientific meetings, both national and international;
- graduate or post-doctoral student supervision;
- participation in college and/or university governance;
- active membership in appropriate professional organization(s);
- being a reviewer of manuscripts for peer-reviewed journals; and
- participation in service activities consistent with Departmental, College, and University missions.

### 3) Promotion to Professor

While an Associate Professor, the person to be promoted should have added to their previous achievements in each of the above-listed norms. Potential for future growth in these areas is also important in the decision to make this appointment. In terms of reputation, the candidate should have become a leader in his/her field and should have attained national and/or international peer recognition, indicated, for example, by invitations to speak at national and international meetings. Candidates must continue to attract research funding, enhance graduate programs, mentor researchers, and be active in curriculum development. They would be expected to be active in faculty governance at College and University levels. They would be expected to be active in their professional organization(s). Above all, they should have potential for continued professional growth, with the ability to guide junior faculty and others with whom they interact.

## **IND Minimal Advancement Expectations While in Rank**

### **For Declared Area of Excellence - Tenure Track Faculty**

**Candidate declares area of excellence in research, teaching or service with satisfactory performance in the other two areas.**

#### **Research:**

At the School of Dentistry, excellence in research is demonstrated through superior scholarship in research and the achievement of national and/or international recognition for significant contributions to the discipline. This is accomplished by obtaining external grant support from national sources, through peer review by external evaluators, peer-reviewed publication of outcomes in top tier journals and dissemination of research through other venues such as peer-reviewed presentations at national and/or international meetings, participation in research panels and grant review processes, mentored student research or other recognition. The criteria for excellence for each rank are outlined below to serve as a guide to candidates seeking tenure and/or promotion in research.

**Promotion from Assistant to Associate Professor with Tenure:**

1. Demonstrate an emerging national reputation for contributions to the field through peer review by external evaluators.
2. Evidence of an independent program of research beyond dissertation work and mentor relationships.
3. Evidence of high quality peer-reviewed publications in top tier journals with submission of 2 to 4 of the most significant publications in rank. Although quality is valued over quantity, a growing body of work must be demonstrated. The majority of the publications should be first, senior or corresponding authorships. Publications are expected in rank at the approximate rate of 1 publication per year. Discussion of the impact of publications in the field and recognition of its quality is expected.
4. Evidence of peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings, or symposia.
5. Demonstrate significant activity in obtaining internal and external grant support from competitive sources with acquisition of external funding to support program of research.
6. Demonstrate the impact of research through invited presentations, citation, journal quality, and/or evidence of significant contributions to the knowledge base in the field that has improved the work of others.
7. Recognitions or honors received as a result of quality research contributions or outcomes.
8. Evidence of a plan for continued and future research activities.

**Promotion from Associate Professor to Full Professor:**

1. Demonstrate a sustained national and/or international reputation for expertise in their field and significant ongoing contributions through peer review by external evaluators.
2. Evidence of high quality peer-reviewed publications in top tier journals with submission of 3 to 5 of the most significant publications in rank. Although quality is valued over quantity, a substantial body of work must be demonstrated. The majority of the publications should be first, senior or corresponding authorships. Publications are expected in rank at the approximate rate of 1-2 publications per year. Discussion of the impact of publications in the field and recognition of its quality is expected.
3. Evidence of multiple peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings or symposia.
4. Demonstrate consistent external grant support from competitive sources including federal funding to support an ongoing program of research.
5. Demonstrate the impact of research through invited presentations, citation, journal quality, and evidence of significant contributions to the knowledge base in the field that has improved the work of others.
6. Participation in research panels and grant review processes sponsored by national organizations and like contributions.
7. Evidenced of mentored student research with outcomes such as co-authored publications, presentations or other recognition.
8. Recognitions or honors received as a result of quality research contributions or outcomes.

**Teaching:**

At the School of Dentistry, excellence in teaching is demonstrated through superior scholarship in teaching, advising and/or mentoring and the achievement of national and/or international recognition for significant

contributions to the discipline. This is documented through peer review by external evaluators, peer-reviewed publication in top tier journals and other forms of scholarly work, dissemination through venues such as peer-reviewed presentations at national and/or international meetings, participation in panels on best practices, evidence that teaching innovations or products are adopted by others, peer and student evaluation that demonstrate impact and learning outcomes, awards and recognitions for teaching excellence and internal and/or external grant funding for teaching innovations and/or best practices. The criteria for excellence for each rank are outlined below to serve as a guide to candidates seeking tenure and/or promotion.

**Promotion from Assistant to Associate Professor with Tenure:**

1. Demonstrate an emerging national reputation for contributions to the field through peer review by external evaluators.
2. Evidence of an evolving philosophy of teaching, curricular development and course improvement and/or innovation.
3. Evidence of quality peer-reviewed publications in top tier journals with submission of 2 to 4 of the most significant publications in rank. Although quality is valued over quantity, a growing body of work must be demonstrated. Other forms of publication such as books on pedagogy, textbooks, laboratory manuals, workbooks, book chapters, software, or other instructional materials provide additional evidence of scholarship in teaching. The majority of the publications should be first, senior or corresponding authorships. The combined body of published work in rank is expected at the approximate rate of 1 publication per year. Discussion of the impact of publications in the field and recognition of its quality is expected.
4. Evidence of peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings or symposia.
5. Demonstrate the impact of teaching through invited presentations, adoption of work products by others, journal quality, and/or evidence of significant contributions to the knowledge base in the field that has improved the work of others.
6. Evidence of teaching, advising or mentoring outcomes documented by peer and student evaluations over time and/or collaborative presentations or publications with students.
7. Teaching awards and other recognitions or honors received for quality teaching, advising or mentoring contributions or outcomes.
8. Internal and/or external grant support to fund innovations or experimentation in teaching pedagogy is recommended.
9. Evidence of a plan for continued growth and future teaching, advising or mentoring activities.

**Promotion from Associate Professor to Full Professor:**

1. Demonstrate a sustained national and/or international reputation for expertise in the field and significant ongoing contributions through peer review by external evaluators.
2. Development of a sophisticated teaching philosophy, continued curricular development and course improvement and/or innovation.
3. Evidence of high quality peer-reviewed publications in top tier journals with submission of 3 to 5 of the most significant publications in rank. Although quality is valued over quantity, a substantial body of work must be demonstrated. Other forms of publication such as books on pedagogy, textbooks, laboratory manuals, workbooks, book chapters, software, or other

instructional materials provide additional evidence of scholarship in teaching. The majority of the publications should be first, senior or corresponding authorships. The combined body of published work is expected in rank at the approximate rate of 1-2 publications per year. Discussion of the impact of publications in the field and recognition of its quality is expected.

4. Evidence of multiple peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings or symposia.

5. Demonstrate the impact of teaching through invited presentations, adoption of work products by others, journal quality, and evidence of significant contributions to the knowledge base that has improved the work of others.

6. Participation in teaching or best practice panels, conferences or projects sponsored by national organizations.

7. Evidence of superior teaching, advising or mentoring outcomes documented by peer and student evaluations over time and/or collaborative presentations or publications with students.

8. Internal and/or external grant support to fund innovations or experimentation in teaching pedagogy is expected.

9. Teaching awards and other recognitions or honors received for high quality teaching, advising or mentoring contributions or outcomes.

**Service:**

At the School of Dentistry, excellence in service is demonstrated through superior scholarship in service and the achievement of national and/or international recognition for significant contributions to the field. This is documented through peer review by external evaluators, peer-reviewed publication of outcomes in top tier journals and dissemination through other venues such as peer-reviewed presentations at national and/or international meetings, evidence that service innovations or approaches are adopted by others, documentation of the impact and outcomes of the service activities, awards and recognitions for service excellence and internal and/or external grant funding for service innovations and/or best practices. The criteria for excellence for each rank are outlined below to serve as a guide to candidates seeking tenure and/or promotion.

**Promotion from Assistant to Associate Professor with Tenure:**

1. Demonstrate an emerging national reputation for contributions to the field through peer review by external evaluators.

2. Evidence of a reflective, scholarly approach to service activities and contribution.

3. Evidence of quality peer-reviewed publications in top tier journals with submission of 2 to 4 of the most significant publications in rank. Although quality is valued over quantity, a growing body of work must be demonstrated. Other forms of publication such as textbooks, book chapters, best practice guidelines or web documents provide additional evidence of scholarship in service. The majority of the publications should be first, senior or corresponding authorships. The combined body of published work in rank is expected at the approximate rate of 1 publication per year. Discussion of the impact of publications in the field and recognition of its quality is expected.

4. Evidence of peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings or symposia.

5. Demonstrate the impact of service through invited presentations, adoption of approach by others, journal quality, and/or evidence of significant contributions to the knowledge base that has improved the work of others.



6. Evidence of high quality service outcomes documented by publication, presentation, treatment success or data that demonstrates the impact of the service.
7. Participation in professional and University service with discussion of the quality and impact of the service. Professional and University may include patient, client and/or community service; involvement in professional societies or organizations; as well as departmental, school or campus committee, task force and other service work.
8. Service awards and other recognitions or honors received for significant service contributions or outcomes.
9. Evidence of internal and/or external grant support to fund service innovations or program of service.

**Promotion from Associate Professor to Full Professor:**

1. Demonstrate a sustained national reputation for contributions to the field through peer review by external evaluators and appointment to committees, advisory bodies and/or commissions in the relevant field.
2. Evidence of a reflective, sophisticated scholarly approach to service activities and contribution.
3. Evidence of quality peer-reviewed publications in top tier journals with submission of 3 to 5 of the most significant publications in rank. Although quality is valued over quantity, a substantial body of work must be demonstrated. The majority of the publications should be first, senior or corresponding authorships. Other forms of publication such as textbooks, book chapters, best practice guidelines or web documents provide additional evidence of scholarship in service. The combined body of published works in rank should be at the approximate rate of 1-2 publications per year. Discussion of the impact of publications in the field and recognition of its quality is expected.
4. Evidence of peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings or symposia.
5. Demonstrate the impact of service through invited presentations, adoption of approach by others, journal quality and/or evidence of significant contributions to the knowledge base that has improved the work of others.
6. Evidence of high quality service outcomes documented by publication, presentation, treatment success or data that demonstrates the impact of the service.
7. Participation in professional and University service with discussion of the quality and impact of the service, leadership role or nature of significant contribution. Professional and University may include patient, client and/or community service; involvement in professional societies or organizations; as well as departmental, school or campus committee, task force and other service work.
8. Service awards and other recognitions or honors received for significant service contributions or outcomes.
9. Evidence of external grant support to fund service innovations or program of service.

**Balanced Case:**

Faculty members determine their area of excellence within the academic norms and context of their primary unit. Faculty should select just one area of excellence unless presenting a balanced case. In some circumstances, faculty may present a record of highly satisfactory performance across all three areas

(research, teaching, service) sufficient to demonstrate comparable long-term benefits to the University. Balanced case expectations are defined by the Indiana University Academic Handbook as: “balanced strengths that promise excellent overall performance of comparable benefit [to excellence in one area and satisfactory in the others] to the University.” This category is to be used in exceptional cases. Letters of solicitation to external reviewers for candidates choosing to present a balanced case must include an explanation of Indiana University’s policy on the balanced case.

### **Tenure**

The criteria for promotion and tenure are closely related, but they are not identical. While both are based on performance commensurate with rank, tenure requires documented evidence of the promise of continued achievement with distinction. While promotion and tenure recommendations are made separately, most tenure-probationary faculty are considered for both at the same time unless they already hold a rank of associate or full professor. Tenure is based on a documented record of achievement that meets defined standards for the department, school, and campus, together with evidence and a plan that demonstrates that the level of achievement is likely to continue and grow. Tenure acknowledges achievement in light of its promise for the future. As with a promotion dossier, the candidate for tenure declares an area of excellence with satisfactory performance in the other two areas except in the instance of a balanced case. The documentation for tenure includes the entire body of the candidate’s academic work to date rather than only work in rank.

### **Indiana University School of Dentistry**

#### **Minimal Advancement Expectations While in Rank**

#### **For Declared Area of Excellence - Clinical Track Faculty**

**Candidate declares area of excellence in either teaching or service with satisfactory performance in the other area.**

#### **Teaching:**

At the School of Dentistry, excellence in teaching is demonstrated through high quality scholarship in teaching, advising and/or mentoring and the achievement of national/international recognition for significant contributions to the discipline. This is documented through peer review by external evaluators, peer-reviewed publication in top tier journals and other forms of scholarly work, dissemination through venues such as peer-reviewed presentations at regional, national and/or international meetings, evidence that teaching innovations or products are adopted by others, peer and student evaluation that demonstrate impact and learning outcomes, awards and recognitions for teaching excellence and internal and/or external grant funding for teaching innovations and/or best practices. The criteria for excellence for each rank are outlined below to serve as a guide to candidates seeking promotion.

#### **Promotion from Clinical Assistant to Clinical Associate Professor:**

1. Demonstrate a record of publically disseminated peer-reviewed scholarship in the field through peer review by external evaluators.
2. Evidence of an evolving philosophy of teaching, curricular development and course improvement and/or innovation.
3. Evidence of quality peer-reviewed publications in top tier journals with submission of 1 to 3 of the most significant publications in rank. Although quality is valued over quantity, a growing body of work must be demonstrated. Other forms of publication such as textbooks, laboratory

manuals, workbooks, book chapters, software, case reports or other instructional materials provide additional evidence of scholarship in teaching. The majority of the publications should be first, senior or corresponding authorships. The combined body of published work in rank is expected at the approximate rate of 1 publication per year. Discussion of the impact of the publications in the field and recognition of its quality is expected.

4. Evidence of peer-reviewed presentations or conference papers at local, regional and national conferences, professional meetings or symposia.

5. Demonstrate the impact of teaching through invited presentations, adoption of work products by others, journal quality, and/or evidence of significant contributions to the knowledge base that has improved the work of others.

6. Evidence of teaching, advising or mentoring outcomes documented by peer and student evaluations over time and/or collaborative presentations or publications with students.

7. Teaching awards and other recognitions or honors received for quality teaching, advising or mentoring contributions or outcomes.

8. Evidence of a plan for continued growth and future teaching, advising or mentoring activities.

**Promotion from Clinical Associate Professor to Clinical Full Professor:**

1. Demonstrate a record of sustained nationally and internationally disseminated peer-reviewed scholarship in field through peer review by external evaluators.

2. Development of a sophisticated teaching philosophy, continued curricular development and course improvement and/or innovation.

3. Evidence of high quality peer-reviewed publications in top tier journals with submission of 2 to 4 of the most significant publications in rank.

Although quality is valued over quantity, a substantial body of work must be demonstrated. Publications may include textbooks, laboratory manuals, workbooks, book chapters, software, case reports or other instructional materials. The majority of the publications should be first, senior or corresponding authorships. The combined body of published work in rank is expected at the approximate rate of 1 publication per year. Discussion of the impact of publications in the field and recognition of its quality is expected.

4. Evidence of multiple peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings or symposia.

5. Demonstrate the impact of teaching through invited presentations, adoption of work products by others, journal quality, and evidence that the contributions to the field have improved the work of others.

6. Evidence of superior teaching, advising or mentoring outcomes documented by peer and student evaluations over time and/or collaborative presentations or publications with students.

7. Teaching awards and other recognitions or honors received for high quality teaching, advising or mentoring contributions or outcomes.

8. Evidence of internal and/or external funding of teaching, advising or mentoring innovations.

**Service:**

At the School of Dentistry, excellence in service is demonstrated through high quality scholarship in service and the achievement of national and/or international recognition for significant contributions to the field. This is documented through peer review by external evaluators, peer-reviewed publication of outcomes in top tier journals and dissemination through other

venues such as peer-reviewed presentations at national and/or international meetings, evidence that service innovations or approaches are adopted by others, documentation of the impact and outcomes of the service activities, awards and recognitions for service excellence and internal and/or external grant funding for service innovations and/or best practices. The criteria for excellence for each rank are outlined below to serve as a guide to candidates seeking promotion.<sup>56</sup>

**Promotion from Clinical Assistant to Clinical Associate Professor:**

1. Demonstrate a record of publically disseminated peer-reviewed scholarship in the field through peer review by external evaluators.
2. Evidence of a reflective, scholarly approach to service activities and contribution.
3. Evidence of quality peer-reviewed publications in top tier journals with submission of 1 to 3 of the most significant publications in rank. Although quality is valued over quantity, a growing body of work must be demonstrated. Other forms of publication such as textbooks, book chapters, best practice guidelines or web documents provide additional evidence of scholarship in service. The majority of the publications should be first, senior or corresponding authorships. The combined body of published works in rank is expected at the approximate rate of 1 publication per year. Discussion of the impact of publications in the field and recognition of its quality is expected.
4. Evidence of peer-reviewed presentations or conference papers at local, regional, and national conferences, professional meetings or symposia.
5. Demonstrate the impact of service through invited presentations, adoption of approach by others, journal quality, and/or evidence of significant contributions to the knowledge base that has improved the work of others.
6. Evidence of high quality service outcomes documented by publication, presentation, treatment success or data that demonstrates the impact of the service.
7. Participation in professional and University service with discussion of the quality and impact of the service. Professional and University service may include patient, client and/or community service; involvement in professional societies or organizations; as well as departmental, school or campus committee, task force and other service work.
8. Service awards and other recognitions or honors received for significant service contributions or outcomes.
9. Evidence of internal and/or external grant support to fund service innovations or program of service.

**Promotion from Clinical Associate Professor to Clinical Full Professor:**

1. Demonstrate a sustained national reputation for contributions to the field through peer review by external evaluators and by appointment to committees, advisory bodies and/or commissions in the relevant field.
2. Evidence of a reflective, scholarly approach to service activities and contribution.
3. Evidence of quality peer-reviewed publications in top tier journals with submission of 2 to 4 of the most significant publications in rank. Although quality is valued over quantity, a substantial body of work must be demonstrated. Other forms of publication such as textbooks, book chapters, best practice guidelines or web documents provide additional evidence of scholarship in service. The majority of the publications should be first, senior or corresponding authorships. The combined body of published works in rank

- is expected at the approximate rate of 1 publication per year. Discussion of the impact of publications in the field and recognition of its quality are expected.
4. Evidence of peer-reviewed presentations or conference papers at national and/or international conferences, professional meetings or symposia.
  5. Demonstrate the impact of service through invited presentations, adoption of approach by others, journal quality, and/or evidence of significant contributions to the knowledge base that has improved the work of others.
  6. Evidence of high quality service outcomes documented by publication, presentation, treatment success or data that demonstrates the impact of the service.
  7. Participation in professional and University service with discussion of the quality and impact of the service, leadership role or nature of significant contribution. Professional and University may include patient, client and/or community service; involvement in professional societies or organizations; as well as departmental, school or campus committee, task force and other service work.
  8. Service awards and other recognitions or honors received for significant service contributions or outcomes.
  9. Evidence of external grant support to fund service innovations or ongoing program of service.

**Balanced Case:**

Faculty members determine their area of excellence within the academic norms and context of their primary unit. Within the School of Dentistry, Clinical Track Faculty are expected to declare a single area of excellence with satisfactory performance in the other.

**MICH** No response submitted

**MID** **Lecturer:** near the completion of a professional or academic degree – non tenured.

**Instructor:**

University: Professional or academic degree, little or no experience in instruction in a university or college level. Non tenure track

CDMI: DDS/DMD degree, with exceptional behavioral and clinical skills and demonstrated ability to teach or interest in teaching, OR Dental Hygiene or Dental Assisting degree/diploma with exceptional behavioral and clinical skills and demonstrated ability to teach or interest in teaching

**Assistant professor**

University: professional or academic degree, more experience than an Instructor. Tenure or non-tenure track

CDMI: DDS/DMD degree with dental specialty designation, with exceptional behavioral and clinical skills and demonstrated ability to teach or interest in teaching.

### **Associate professor**

University: at least 4 years as assistant professor, professional or academic degree, there must be a record of accomplishment in two of three areas (teaching, scholarly activity and institutional or extramural professional service). Tenure or non-tenure track

CDMI: Previously held a full-time university appointment at the parallel academic or clinical rank of Associate Professor for at least five (5) years

### **Professor**

University: 5 years as associate professor – record of outstanding and extensive Professional accomplishment in one of three areas and significant accomplishments in the other two areas

CDMI: Previously held a full-time university appointment at the parallel academic or clinical rank of Professor for at least five (5) years

OSU No response submitted

## **PITT GUIDELINES FOR APPOINTMENT AND PROMOTION OF ASSOCIATE PROFESSOR AND PROFESSOR (TENURED AND NON-TENURED) IN THE UNIVERSITY OF PITTSBURGH SCHOOL OF DENTAL MEDICINE**

### **INTRODUCTION**

The University of Pittsburgh Appointment and Tenure Policies sets for the principles upon which School of Dental Medicine faculty appointments and promotions are based. The criteria and guidelines contained in this document supplement and amplify University policies as they are applied in the School of Dental Medicine.

The Academic ranks for faculty in the School of Dental Medicine are Instructor, Assistant Professor, Associate Professor and Professor. The prefixes, Visiting, Research, Adjunct, and Clinical, may be applied at all levels of rank as appropriate. Visiting status is used for those individuals who are appointed on a temporary basis, usually for no more than one year.

Research status is given to those full-time faculty whose principal academic function is investigation. Adjunct status is given to Dental School faculty whose primary appointment is outside of the University. Clinical faculty are part-time members, or full-time members, who contribute predominantly to clinical care and/or education rather than to scholarship.

Full-time faculty at the rank of Associate Professor and Professor without prefix may be either tenured or non-tenured. Tenure for dental school faculty requires evidence of significant scientific scholarship or, in certain well-defined circumstances, exceptional clinical abilities in addition to excellence in teaching as an indicator that the individual will continue to be an outstanding faculty member for the duration of his career.

Full-time faculty in clinical departments who demonstrate excellent achievements in teaching and professional service as their principal academic activities may attain the rank of Associate Professor and Professor outside of the tenure stream. These non-tenured, senior faculty will have all of the rights and privileges afforded persons of the same rank who have been granted tenure except for the assurance of a permanent faculty position as qualified by the University. Instead, such non-tenured Associate Professors and Professors will be granted term appointments; renewal of such appointments will be based in part on documented continued excellence of performance and contribution to the goals of the School and their respective departments.

#### **CRITERIA FOR TENURE**

Research (Scholarship) and teaching are the necessary and primary requisites for promotion or appointment to tenure. The balance between accomplishments in research and teaching may vary considerably from one candidate to another, but both must be present before tenure is granted. Professional service activities by a faculty member should be weighed into any decision regarding tenure, but such activities in the absence of both teaching and scholarship are not an adequate basis for tenure.

One of the two requisites for tenure is scholarship. Scholarship is the long-continued systematic study, especially in a University, leading to competent mastery of one or more of the highly organized academic studies; more narrowly, advanced study which leads to the acquisition of highly specialized knowledge in some special field, along with accuracy and skill in investigation and powers of critical analysis in interpretation of such knowledge. All candidates for tenure in the School of Dental Medicine should have demonstrated significant accomplishment in scholarly endeavors, which in most, but not all, instances is synonymous with accretion of knowledge using laboratory, clinical and other research tools. Irrespective of its form, the candidate's scholarship must provide evidence of continued creativity.

*\* May 16, 1978; Amended October 18, 1979; May 14, 1980; February 13, 1985*

The other primary requisite for appointment or promotion to tenure is demonstrated skill in, and dedication to, teaching. The candidate should have demonstrated a capacity and a desire to maintain teaching effectiveness and show ability for continuing growth as a teacher. It is implicit that excellence in teaching includes being a model of professional conduct for students, colleagues and patients. The quality and quantity of a candidate's teaching must be documented by the chairperson in his supporting letter.

Professional and public services and administrative contributions by a faculty member should be positively weighed into any decision regarding tenure.

#### **GUIDELINES AND QUALIFICATIONS FOR ASSOCIATE PROFESSOR AND PROFESSOR**

Persons being considered for appointment or promotion to the rank of Associate Professor or Professor must meet a substantial proportion of the qualifications contained in the following guidelines. In order to qualify for tenure, the greater emphasis must be part scholarship and teaching. For the non-tenured appointment, there may be greater emphasis on teaching and service and less emphasis on investigation, but scholarship must be represented.

## **I. ASSOCIATE PROFESSORSHIP AND PROFESSORSHIP (WITH TENURE)**

### **A. Research**

1. Originality, independence, leadership, and continuing productivity in investigation or scholarly activity.
2. Recognizable objectives or an underlying theme of the scholarly program.
3. Publication of research reports in leading refereed journals.
4. Publications demonstrating innovative conceptualizations or novel solutions to orofacial problems.
5. Authorship or important review articles, chapters, and/or books.
6. Evaluation of scientific accomplishment should be obtained from peers on a national and international basis.
7. Evidence of continuing research support and the candidate's role in generating it.
8. Membership and participation in leading scientific or clinical societies in his field.

### **B. Teaching**

1. Preparation and presentation of material in a well-organized, current, and intellectually stimulating fashion as viewed by senior faculty of the school and department, dental and graduate students and residents.
2. Contributions to design, organization and/or presentation of a course, clinical program or sub-division thereof. In exceptional circumstances which are clearly documented locally and/or nationally, teaching can be a major criterion for tenure in clinical departments.
3. Ability to evaluate and counsel dental and graduate students and residents.
4. Active participation in post-graduate and continuing educational activities.

### **C. Professional Service**

1. Excellence as an academic role model for dental and graduate students and for junior colleagues.
2. Participation in scientific and/or professional committees advisory to the government or to foundations, as well as service as office of regional, national, and international scientific societies.
3. Effective participation on the committee of the faculty member's department, the School of Dental Medicine, and/or the University of Pittsburgh.
4. Evidence that the candidate plays a critical role in the programmatic needs of the department and school. This should be documented in the letter of proposal.
5. In the clinical disciplines, professional service includes the provision of high quality patient care in the candidate's field.

## **II. ASSOCIATE PROFESSORSHIP AND PROFESSORSHIP (NON-TENURED)**

As mentioned previously, appointment or promotion in the non-tenured stream requires demonstrable scholarship. In the clinical departments particularly, there should be evidence of excellent teaching and professional service, as well as demonstrated research and scholarly activities.

### **A. Teaching**

1. Ability to stimulate trainees towards scholarship in dental medicine and dental practice.
2. Preparation and presentation of material in a well-organized, current and intellectually stimulating fashion as viewed by senior faculty of the school and



department, dental, and graduate students.

3. Leadership in design, organization, and/or presentation of a course, clinical program, or sub-division thereof.

4. Ability to evaluate and counsel dental and graduate students and residents.

5. Appropriate participation in postgraduate and continuing educational activities.

#### **B. Professional Service**

1. Demonstration of a scientific and scholarly approach to a major field of clinical dental medicine.

2. Provision of high-quality patient care in the chosen specialty of the faculty member.

3. Excellence as a professional role model for dental students.

4. Participation in local and national clinical symposia, seminars, and courses.

5. Effective participation in professional societies; local, regional, national, and international.

6. Participation in community activities, where appropriate.

7. Effective participation on the committees of the faculty member's department, the School of Dental Medicine, and/or the University of Pittsburgh

8. Important contributions as a department and faculty member in the operation, development and improvement of the department and/or School of Dental Medicine.<sup>4</sup>

#### **C. Research**

In clinical departments, the candidates may demonstrate active and consistent scholarship by the publication of research reports, case studies, and other observations in refereed dental and related journals and by the publication of books, book chapters, and review articles in non-refereed journals.

### **III. CLINICAL FACULTY**

#### **A. Clinical Associate Professor**

Clinical Associate Professors must exhibit high levels of skill as practitioners and teachers. They are expected to contribute actively to the educational programs of the School of Dental Medicine, and they must demonstrate the ability to stimulate students and trainees toward a scholarly approach to dental practice. Such clinical faculty should provide high-quality patient care, as judged by their peers and should willingly involve their patients in teaching activities.

#### **B. Clinical Professor**

Clinical Professors must have achieved undisputed recognition as outstanding teachers and clinicians. They must demonstrate leadership in design, organization, and presentation of material, and they will be expected to continue to contribute to the formal teaching programs of the School of Dental Medicine.

#### **C. Distinguished Service**

Clinical Associate Professors and Clinical Professors who have contributed substantially to the academic programs of the School of Dental Medicine through extensive service may be awarded the rank of Distinguished Clinical Associate Professor or Distinguished Clinical Professor. Infrequently granted these ranks or distinction are a special recognition of senior clinical faculty by the University for meritorious past service.

#### **IV. ALTERNATE PROMOTION OPTIONS**

Non-tenured senior faculty may qualify for tenure by virtue of increased scholarly productivity and may be recommended for tenure through the usual academic process. Alternatively, tenured Associate Professors may, with their consent, be given formal consideration for non-tenured Professorship appointments.

#### **PROCEDURES FOR FACULTY PROMOTION**

The University of Pittsburgh., Appointment and Tenure Policies (May 16, 1978) require periodic consideration of reappointment or promotion in the academic ranks. In addition, each faculty member has the privilege of discussing his position with his department chairperson and/or Dean. A recommendation for promotion will normally be initiated by the Department Chairperson. It will be the responsibility of the department chairperson to annually meet with each faculty member who has not reached the rank of Professor to communicate the goals which must be attained to satisfy the guidelines and criteria for recommendation for reappointment and promotion. This annual review process is particularly critical to newly appointed and non-tenured faculty.

#### **A. PROMOTION COMMITTEE**

1. The dean of the School of Dental Medicine will appoint the chairperson of the promotion committee for a term of three years, which may be renewed by the dean.

2. The chairperson will appoint the ad hoc promotion committee(s) which will consist of the following tenured faculty:

Three full-time tenured members of the School of Dental Medicine.<sup>5</sup>

The rank of members of the ad hoc committee(s) should be equal to or higher than, the rank of the promotion under consideration.

If the chairperson of the committee is a member of the same department as the candidate for promotion, the chairperson will temporarily relinquish his position for the particular promotion and the dean will appoint a chairperson pro tem from among the tenured professors in the School of Dental Medicine. This Chairperson will then appoint the promotion committee utilizing the same guidelines.

3. Recommendations for promotion are made by the department chairperson to the division head, and then to the dean after formal review and consultation with tenured faculty in the department. The results of this assessment shall be included in the letter prepared by the department chairperson and/or the division head, and sent to the dean together with the candidate's curriculum vitae.

4. The information needed by the promotion committee to adequately review consists of the candidate's curriculum vitae and personal dossier, the department chairperson's recommendation and assessment, and six letters of support. Letters of support shall include a minimum of four from individuals not suggested by the candidate.

The procedure for promotion to the rank of professor will be the same as those for associate professor with tenure except greater emphasis will be placed on evidence attesting to the candidate's continued advancement as a scholar.

**B. The dean** takes under advisement the report provided by the promotion committee together with the documents and supporting information. The dean will then forward this report with his recommendation along with a full dossier of the candidate to the senior vice-chancellor of the Health Sciences. A "full

dossier” includes a letter from the dean, a letter from the department chair and/or division head, report from the promotion committee, external referee letter, and the candidate curriculum vitae. The dean’s letter will provide a statement about who the external references are and their connection with the candidate.

Concurrence by the Provost is required and only the president can award tenure and promote Faculty members to the rank of professor. In the best interest of, and in order to maintain confidentiality regarding the faculty member(s) concerned no information or publicity will be given by anyone until the recommendations have been acted upon by the appropriate University officials.

C. If the department chairperson and/or the division head does not recommend promotion to the Dean, the faculty member may appeal that decision to the dean. If the Dean concurs with the department chairperson and/or the division head, the faculty member must be provided with reasons for the decision. In the event the department chairperson and/or the division head does not recommend promotion to the dean, and the dean feels the action is inappropriate, the dean forwards the credentials to the Promotion Committee after notifying the Department Chairperson of his decision and the basis thereof.

The general appeal procedures are stated in the University of Pittsburgh Faculty Review and Appeals, Principles and Procedures (May 16, 1978). These policies provide a mechanism for appeal to the dean, vice chancellor of the Health Science, and chancellor of the University. The appeal process may utilize an appeals panel and a University Hearing Board.

#### **PERSONAL DOSSIER**

A personal dossier shall include copies of, or summaries of:

1. All publications
2. Research grants and projects
3. Teaching responsibilities
4. Teaching evaluations
5. Presentations (local, national, and international)
6. Awards and honors
7. Professional and public services<sup>2</sup>

#### **FULL DOSSIER**

A full dossier includes:

1. Candidate’s curriculum vitae
2. Letter to Provost from Dean
3. Letter from Department Chair and/or Division Head
4. Reports from appropriate Faculty Committees (e.g., Search Promotion, Tenure, etc.).
5. External Referee Letters (minimum of 6; 4 not suggested by candidate)

#### **Provost’s Office Reviews the Following Faculty Personnel Actions:**

- Requests to negotiate or hire (Provost’s Area Schools only)
- Affirmative Action and Search Procedures (Provost’s Area Schools only)
- Initial faculty appointment (all ranks, TS and NTS; excludes visiting)
- Faculty promotions (TS and NTS)
- Sabbaticals and Leaves
- Type A and B Transfers
- Academic Administrative Appointments (Assoc. or Asst. Deans, Chairs; includes “acting and “interim”)
- Graduate Faculty Membership

## **UB Academic Clinician subcategory**

Assistant Professor: Assistant Professors under the Academic Clinician category expected to have attained the doctoral degree or its equivalent.

Associate Professor: Associate Professors under the Academic Clinician category are expected to have achievements in teaching, creative scholarship and service extending well beyond those involved in the attainment of the doctoral degree or its equivalent. In all cases, the candidate must have demonstrated continued high performance as a teacher, a commitment to high standards of scholarship, and evidence of effective participation in school, university and/or community service. The quality of the teaching should be unambiguous and unequivocal. Evaluation of the candidate's teaching should be supported by substantial evidence of favorable student and faculty review. Furthermore, evaluation of the candidate's overall record should include an assessment of whether the individual will continue to maintain the high level of performance should the promotion, particularly with a continuing appointment, be awarded. Evaluation of the candidate's record must be supported by substantial evidence of peer review which has been carried out in a manner characteristic of and appropriate to the discipline. The candidate must demonstrate solid professional achievement, progress toward a national reputation, and the potential to meet the requirements for the rank of Professor. More specifically, candidates for appointment or promotion to the rank of Associate Professor under the Academic Clinician category would be expected to:

- Have fulfilled all requirements of lower academic ranks;
- Have demonstrated outstanding clinical care performance, have specialty board certification in their field, if it exists, or sufficient experience demonstrating exceptional competence in one's clinical field.
- Have demonstrated a high level of competence in teaching as evaluated by recognized criteria
- Have made a meaningful and effective contribution to those service activities that involve the educational programs and/or the management of the patient care clinics under the aegis of the School of Dental Medicine or its affiliated hospitals, the university, the community, and/or local, regional or national professional organizations
- Have experience in program development representing significant independent accomplishment, including new educational programs or courses, grant applications, or membership on review councils and committees;
- Have engaged in creative scholarship, as represented by the acquisition of new knowledge or insights in, but not be limited to, applied clinical, educational or health policy issues, and the communication of such scholarship to appropriate professional groups. Communication can be achieved via the following methods:
  - i. publications in refereed professional journals;
  - ii. published abstracts or invited papers that have been presented at national meetings;
  - iii. books and book chapters;
  - iv. development of new instructional material.

It is expected that the candidate will be the first author on a significant number of any multi-authored reports and that a meaningful number of the reports will have undergone peer review by competent individuals in the field.

- Show evidence of progressing toward a national reputation in their field, as

demonstrated through invited participation in workshops, symposia and presentation, consultantships, publications, etc.

Professor: Professors under the Academic Clinician category are expected to have met criteria for Associate Professor. In addition, candidates for appointment at or promotion to this rank should be clearly established, have a national reputation, be highly regarded clinicians and clinical scholars, and have demonstrated the ability to train other clinicians and clinical scholars where this has been part of their responsibilities. Candidates for the rank of Professor should have clear, strong evidence of superior performance as an academic clinician and that such performance can be expected to continue. Appointment or promotion to the rank of Professor is never simply a reward for previous activities or services. Those faculty holding this rank should have primary responsibility for the clinical educational programs and clinical scholarship of the University, and be acknowledged experts in their disciplines. Nothing less than excellence is acceptable.

#### **Academic Researcher subcategory**

Assistant Professor: Assistant Professor under the Academic Researcher category is expected to have attained the doctoral degree or its equivalent.

Associate Professor: Associate Professors under the Academic Researcher category are expected to have achievements in research and creative scholarship, teaching, and service extending well beyond those involved in the attainment of the doctoral degree or its equivalent. In all cases, the candidate must have a continued high level of performance as a teacher, a commitment to high scholarly standards, and evidence of effective participation in school, university and/or community service. The quality of the research and creative scholarship of such a candidate should be unambiguous and unequivocal. Furthermore, evaluation of the candidate's record should include an assessment of whether the individual will continue to maintain the high level of performance should promotion, particularly with a continuing appointment, be awarded. The evaluation of the candidate's record must be supported by substantial evidence of peer review has been carried out in a manner characteristic of and appropriate to the discipline. The candidate must demonstrate solid professional achievement and the potential to meet the requirements for the rank of Professor. More specifically, candidates for appointment or promotion to the rank of Associate Professor under the Academic Researcher category are required to:

- Have fulfilled all requirements of lower academic ranks;
  - Have demonstrated a high level of competence in teaching or pre-doctoral students and/or postdoctoral students and/or to the mentoring of junior faculty, as evaluated by recognized criteria
  - Have engaged in scholarship, as represented by the acquisition of new knowledge dealing with fundamental clinical, biological, behavioral, education, or health policy issues, and the reporting of such scholarship.
- Reporting can be achieved via the following methods:
- i. publications in refereed scientific and professional journals;
  - ii. published abstracts or invited papers that have been presented at national meetings;
  - iii. books and book chapters. It is expected that the candidate will be the first author of at least one-half of multi-authored reports and that a significant number of the reports will have undergone peer review by competent individuals in the field

- Experience in program development representing significant independent accomplishment, including grant applications, or membership on review councils and committees;
- Ability to attract external peer-reviewed research and/or research-training grant support;
- Have made a meaningful and effective contribution to service activities involving the School of Dental Medicine, the University, the community, and/or local, regional or national professional organizations
- Shown evidence of progressing toward a national reputation in his or her field, as demonstrated through invited participation in workshops, symposia and presentations, consultantships, publications, etc.;

Professor: Professors under the Unqualified Rank Academic Research category are expected to have met all criteria for Associate Professor. In addition, they should be clearly established, have a national reputation, be highly regarded scholars, and have demonstrated the ability to direct the research programs or scholarship activities of students. Candidates for the rank of Professor should have clear and strong evidence of superior performance as a researcher and creative scholar, and as a teacher, and that such performance can be expected to continue. Appointment or promotion to the rank of Professor is never to be simply a reward for activities or services already performed. Those faculty holding this rank have primary responsibility for the research and scholarship of the University, and their attainments as scholars in their disciplines must be of the first order. Nothing less than excellence is acceptable.

**WVU** West Virginia University School of Dentistry Policies and Procedures for Annual Faculty Evaluation, Promotion and Tenure Revised May/2006 Approved: Vice President for Health Sciences, December 15, 2006 Accepted: Office of the Provost, December 15, 2006

**I. INTRODUCTION** Academic and professional performance reviews at the WVU School of Dentistry go beyond a narrow periodic review process for promotion and/or tenure purposes. As important as these latter decisions are, faculty are also reviewed annually to establish a basis for merit salary adjustments and for professional development purposes. Properly administered, this faculty evaluation system will permit recognition of achievement, allow for professional growth and development and assure retention of the faculty who demonstrate a high level of achievement, in the mission areas of scholarship, teaching and service, as individually appropriate. The evaluation of faculty must be guided by principles and procedures designed to protect academic freedom and to ensure accuracy, fairness and equity. This document broadly outlines these principles. It is to be noted that this document is supplemented by University evaluation guidelines entitled “West Virginia University Policies and Procedures for Annual Faculty Evaluation, Promotion and Tenure”. This latter document is distributed by the Provost’s office early in the first semester of each year and can be found on the web site of the Provost.

**II. GENERAL PRINCIPLES OF FACULTY EVALUATION** The primary responsibility for presenting a faculty member's accomplishment for evaluation rests with the individual person. However, it is reasonable to expect a meaningful level of assistance from the departmental chair and the administration of the School. Faculty colleagues participate in annual evaluations and review for promotion and tenure through memberships on departmental or school-wide committees. The legal authority and responsibility of chairpersons, the Dean and the Vice President for Health Sciences also enter into the determination of academic personnel decisions as do the needs and circumstances of the departments and School. Faculty members are expected to contribute to the missions of the department in which they are appointed. The extent to which a faculty member's responsibilities relate to the various mission areas will vary. Collectively, the faculty within a department teach, engage in research and scholarship, publish and disseminate research findings and new knowledge and provide public, professional and institutional service. The evaluation of faculty is to occur in relation to that person's particular roles within the department and school. Accomplishments of faculty members are judged in the context of these roles. The details of a faculty member's specific assignment will be subject to joint consultation but are to be determined by the appropriate administrator. Adjustments in the expectations for faculty members may occur in keeping with changing priorities of the School, the department and personal interests. The faculty evaluation process has three distinct components: (a) the annual evaluation, (b) evaluation for promotion in rank and (c) evaluation of tenure-track faculty for tenure.

**A. Annual Evaluations** Annual evaluation provides an opportunity to review a faculty member's past performance and to develop future goals and objectives; it forms the basis for any annual merit salary raises and other rewards. Cumulatively, annual evaluations establish a continuous written record of expectations and performance that will encourage professional growth and provide support for retention, promotion, tenure and other recognition. These written evaluations, which are required for all full-time and continuing part-time faculty members, provide individuals with a written record of past performance, accomplishments and continuing expectations, an ongoing critique of strengths and weaknesses, and support recommendations and decisions concerning reappointment, retention, promotion, and tenure as well as program assignments, sabbatical and other leaves of absence, and performance-based salary increases. The primary purpose of these annual evaluations is to assist individual faculty members in developing their talents and expertise to the maximum extent possible, and in promoting continuing productivity over the course of their careers, consistent with the role and mission of the appointment. Annual evaluation for all faculty, whether tenure-track, tenured, clinical-track or part-time will be conducted at the departmental level by the chair and by a peer committee based on documentation in the personnel file. Written evaluations will be forwarded to each faculty member and to the Dean, who may provide an evaluative statement. The annual evaluation should be related to one's assignment and performance, and should summarize one's accomplishments and offer constructive suggestions for future development. The review is not limited to events of the immediately previous one-year period; it is also to be a review of annual evaluation statements from previous years, in order to assess broad achievements or whether suggestions for improvement have been addressed. The resultant annual assessment will be used to guide the faculty member in areas in which improvement may be needed, and, if positive, as a basis for merit salary adjustment. The annual evaluation also provides the opportunity to develop

changes in responsibilities that reflect strengths of the individual and the needs of the School.

1. **Tenure-Track Faculty** Tenure-track faculty are those who are in a tenure-track appointment but are not yet tenured. For these persons, the annual evaluation provides an assessment of performance and develops information concerning the faculty member's progress toward promotion and tenure. It communicates areas of strength and alerts the faculty member to performance deficiencies at the earliest possible time. Any concerns held by the evaluators regarding the faculty member's performance should be stated in the written evaluation, which is intended to enhance the faculty member's chances of achieving promotion and tenure. In one's first review, limited evidence of the faculty member's progress will be available. For that review, material in the file such as reports by colleagues on one's teaching and information on one's activities in research and service are useful in order to assess progress. As one moves through the tenure-track period, annual evaluations will focus increasingly on the successful outcomes of one's activities rather than simply on the activities themselves.

Annual evaluations will indicate whether or not progress toward promotion and/or tenure is occurring in a positive manner and the specific justifications for this conclusion. While the absence of negative annual evaluations does not guarantee the granting of tenure, these evaluations should apprise tenure-track faculty members of performance deficiencies. Rarely, the evaluations will result in termination of the individual's appointment, sometimes prior to the critical year, and where appropriate, terminal contracts; in these cases, notice shall be given in accord with Board policy.

2. **Tenured Faculty Not Fully Promoted** The annual evaluation of faculty, who are tenured, but not fully promoted, will generally emphasize both quantitative and qualitative progress toward the rank of the professor. While not all faculty may attain the highest possible rank, annual evaluations should guide faculty toward that achievement.

3. **Tenured Faculty Fully Promoted** Promotion to the highest rank requires a consistent record of achievement at a level that indicates many strengths and few weaknesses. Consequently, the primary purpose of evaluating faculty at these ranks is to describe their performance in the context of appropriate expectations, an important factor in performance-based salary adjustments and reappointment. The annual evaluation process is also used to encourage faculty members to continue to perform at exemplary levels.

4. **Clinical-Track Faculty** Clinicians who select this clinical emphasis, non-tenure track must be heavily committed by choice to clinical assignments. Faculty in the clinical-track are not subject to the seven year probationary period of the tenure track; promotion to senior ranks is not a requirement for institutional commitment and career stability. Individuals in the clinical-track have voting rights in their respective departments and in the School, and are eligible for appointment to any administrative office in the School, including the department chair and dean. Clinical-track faculty have all rights and privileges of academic freedom and responsibility. Annual evaluation of clinical-track faculty will be based on assignments as described in the letter of appointment and in subsequent annual documents that identify departmental responsibilities in teaching, service and scholarship. The annual evaluation will focus on specific recommendations for improvement and professional development. The annual evaluation of a promotable faculty member will generally emphasize quantitative and qualitative progress toward the next appropriate rank. While not all promotable faculty may attain promotion, annual evaluations should assist them toward that goal.

5. **Part-Time Faculty**



Evaluation of continuing part-time (less than 1.00 FTE) faculty will be based on assignments as described in the letter of appointment, subsequent documents, and annual Faculty Activity and Contribution Worksheet. Evaluation will focus primarily on strengths and weaknesses, on the best use of one's talents to meet the unit's needs, and on specific recommendations for improvement and professional development. Occasional (0.1 FTE or less) part-time faculty should receive periodic reviews that are appropriate to their assignment.

**B. Descriptors for Annual Review** The annual review of one's performance in each of the mission areas to which one is assigned shall be assessed as Excellent [characterizing performance of high merit], Good [characterizing performance of merit], Satisfactory [characterizing performance sufficient to justify continuation but not necessarily sufficient to justify promotion or tenure], or Unsatisfactory.

Based on these descriptors, a faculty member with a preponderance of "satisfactory" or "unsatisfactory" ratings, particularly in an area in which a significant contribution is required, would not qualify for promotion or tenure. The assessments provided by annual reviews should be a basis for those periodic recommendations forwarded to the Vice President for Health Sciences which relate to promotion, tenure or negative action. Positive recommendations for promotion and/or tenure should be supported both (a) by a series of annual reviews above the "satisfactory" level, and (b) beyond those reviews, by performance which is judged to meet the more rigorous standard of "significant contributions." Tenure recommendations should go beyond a recommendation for promotion and justify a long-term commitment to faculty member. (See below and section V as appropriate).

**C. Criteria for Promotion in Rank and/or Tenure** Promotion in rank recognizes exemplary performance of a faculty member. The evaluation for promotion in rank provides the opportunity to assess a faculty member's growth and performance since the initial appointment or since the last promotion. For an award of tenure, tenure-track faculty undergo a particularly rigorous evaluation involving an assessment of accumulated accomplishments and the likelihood that the faculty member's level of performance will be maintained. Successful teaching is an expectation for all faculty who are assigned to teach. As a criterion for either tenure or promotion, significant contributions will have been made in teaching. In order to be recommended for promotion, a tenured or tenure-track faculty member normally will be expected to demonstrate significant contributions in two of the following areas; teaching in the classroom or other settings, research, and service. In the third area of endeavor, the faculty member will be expected to make reasonable contributions. The areas of significant contribution in which each faculty member is expected to perform will be identified in the letter of appointment, or modified in a subsequent document.

In the teaching context, significant contributions are normally those which meet or exceed those of peers recently (normally, within the immediately previous two-year period) achieving similar promotion and/or tenure who are respected for their contributions in teaching at West Virginia University. In some cases, external reviews of teaching contributions may be appropriate. The term significant contributions in research means performance in research which meets or exceeds that of peers recently (normally, within the immediately previous two-year period) achieving similar promotion and/or tenure who are respected for their contributions in research at peer research universities. Tenure track faculty are expected to demonstrate a continuous program of research accomplishments. Peer research universities are determined by the department, subject to approval by the Dean. In service, a candidate for tenure normally will be expected to demonstrate reasonable contributions. In order to be recommended for tenure a

faculty member normally will be expected to demonstrate significant contributions in teaching in the classroom or other settings and in research. In awarding tenure, the overriding issue is “Does the School of Dentistry want to make a long-term commitment to the faculty member?” In answering this question, the following points aid in the answer:

- (1) Is he or she a quality faculty member as measured against the School’s “Guidelines for Annual Evaluation, Promotion in Rank and the Award of Tenure” (Section IV and V, below) and a series of annual reviews?
- (2) Does his or her expertise further the mission of the School?
- (3) Does he or she show evidence of a continued and sustained level of professional productivity in both qualitative and quantitative ways?

For faculty who have service as an area of significant contribution, service activities provided for the benefit of the citizens of the state will receive primary emphasis when reviewed for promotion purposes. While service to the university and professions are worthy of consideration in this context, normally a faculty member must have significant service activities, which can include the creation and direction of service-learning projects, directed to the citizens of West Virginia. Exceptions to this normal practice may occur when a faculty member provides extraordinary and extended service to the university, profession, or on a national or international level. Such exceptions should be identified in the letter of appointment or subsequent documents. The decision to accept a recommendation for or against retention or the awarding of tenure shall rest on both the current and projected program needs and circumstances of the department and School and on the strengths and limitations of the faculty member as established in the annual evaluation process. A full-time or part-time assignment to an administrative position or to a unit other than the one in which the faculty member holds or seeks tenure does not carry with it an automatic modification of criteria for promotion or tenure. A faculty member who accepts such an assignment, and who seeks promotion or tenure, should have a written agreement concerning both status and expectations within the department in which the focus of tenure resides. Such an agreement must be approved by the Dean and by the Vice President for Health Sciences.

After a faculty member achieves tenure, the criteria requiring significant contributions in teaching and research, and reasonable contributions in service may be modified on an individual basis to require significant contributions in a different pair of these categories, with reasonable contributions required in the third. Such a modification should be initiated primarily to assist the department or the School in achieving its mission and goals, as it addresses the three areas of university concern. It is appropriate to establish a certain time period which must elapse after the approval of the request before the individual could be considered for promotion using the new expected areas of significant contribution. Such a modification must be agreed to by the faculty member, chairperson of the department, in consultation with the appropriate departmental committee, and the Dean and must be stipulated in subsequent letters of agreement. The modification also must be approved by the Vice President for Health Sciences. Typically a request for a change in the areas of significant contributions will propose replacing research with service as such an area. A document for this purpose should be developed which identifies both the types and quantity of service expected in the new context and the ways in which the quality of that service will be measured. In most cases, service will be directed toward patient care and the needs of the citizens of West Virginia, and will go far beyond the kinds of service which are expected in order for one to achieve good university citizenship. Reasonable contributions in research must also be defined, in both qualitative and

quantitative terms. If such a request is granted, external reviews of service will be expected.

### **III. GUIDELINES FOR CHANGING BETWEEN TENURE AND**

**CLINICAL TRACKS** New faculty appointees, with advice and support from their Chairperson and the Dean, are expected to consider very carefully which academic track is most appropriate to their training and probable assignments as faculty members. Careful selection of track at the time of initial appointment should obviate the need for subsequent changes in all but exceptional cases. Individuals who do decide that their initial choice of the clinical track or traditional tenure track was inappropriate will be permitted one opportunity to cross over to the other track. To do so, they must meet the following requirements:

1. Meet all criteria for appointment at the same rank to the other track, and have a series of annual reviews that are collectively judged to be good or excellent.
2. The action must be approved by the appropriate Departmental Chairperson (for joint appointees, relevant Chairs must agree), the School of Dentistry Faculty Evaluation Committee, the Dean and the Vice President of the Health Sciences Center by December 1<sup>st</sup> of the academic year in which the request is made.
3. Changing from the clinical track to tenure track at a rank of associate professor or professor will require review and approval as described in #2 above. Tenure may not be granted at the time of the change. Years spent in the clinical emphasis track may be included as part of the probationary period in the tenure track provided that there is written recommendation from the chairman. The faculty member would enter the typical six year probationary period based on the aforementioned agreement. The faculty member would apply for award of tenure by the usual Promotion and Tenure Process, including both internal and external evaluation. [Moved up]
4. Changing from the tenure track to the clinical track at the rank of assistant or associate professor will require review and approval as described in #2 above. After such a change, the faculty member would wait two full years minimum, beginning with the next contract year, before applying for promotion by the usual process.

### **IV. GUIDELINES FOR ANNUAL EVALUATION, PROMOTION IN RANK AND/OR THE AWARD OF TENURE. FULL-TIME FACULTY.**

#### **A. Introduction**

Recommendations for promotion and/or tenure are based upon performance in the three categories of primary University concern (i.e., teaching, research and service) as they relate to the conceptual and operational objectives of the School of Dentistry. Patient care, while considered a subcategory of service, will be treated as a separate category with its own evaluation criteria. These Guidelines also reinforce the annual evaluation process in monitoring progress toward the next promotion or a tenure decision. Such performance will be documented by presenting evidence of accomplishment using the criteria presented below. Annual Evaluation will focus on the current year's activities and also include a review of previous years. Promotion and Tenure decisions will be based on accomplishments since the last promotion or the initial appointment, whichever is appropriate. Merit pay will be based on Annual Evaluations as directed by the Dean of the School of Dentistry. These guidelines will be considered in the perspective of the individual's opportunities and assigned responsibilities as described annually in the Faculty Activity and Contribution Worksheet. If faculty who are already tenured are not given time or assigned responsibilities in a category (teaching, research, service and patient care), they will not be expected to meet any criteria in that category. Such assignments may affect one's

eligibility for promotion. Tenure track faculty must meet all guidelines for tenure regardless of time scheduled in each criteria area. These guidelines will be used for all full-time faculty.

Three types of criteria will be used for evaluation.

1. A number of criteria are labeled “All”. All faculty performing at the satisfactory rating or better in that category are expected to meet these criteria every year. Those not meeting these criteria, based on documentation in the file or its absence, should be given an unsatisfactory performance evaluation in that category.
2. Most criteria are ranked in an order of increasing difficulty and are labeled Level I, II, III or IV. The criteria levels are found under the categories of teaching, research, service and patient care on the following pages. The faculty member should meet several or multiple criteria as described in the chart below, since the last promotion, or the initial letter of appointment. Some accomplishments are of such significance that they will be considered at all evaluation levels. These accomplishments would include, but not be limited to: - specialty training - advanced educational degrees - specialty board certification - significant national or international awards. Criteria that result in a product rather than an evaluation of behavior or performance may be credited multiple times in the evaluation period.
3. Several individual criteria are evidence of a significant contribution. They are indicated with a footnote and must be met by faculty with time or assigned responsibilities in that category every one to three years. Peer reviewed publications are expected of all faculty with significant research responsibilities. Scholarly activity is a significant activity and is encouraged, and expected of all teaching faculty. Those not meeting these criteria, based on documentation in the file or its absence, should be given an unsatisfactory performance evaluation in that category

For each category except patient care, the following chart provides instructions for application of the criteria in section IV B. It is important to note that the criteria listed represent the minimum acceptable number for a particular performance rating. The quality of each item is to be given the primary consideration when presenting with the minimum number. Faculty rank determines the criteria to be met in each category for evaluation (except Patient Care). Normally, for those faculty being evaluated for promotion, they must achieve a performance ranking of “good” or “excellent” in their current academic rank in each of the areas of teaching and research to be deemed as having made a significant contribution for promotion of the next higher rank. For the areas of service and/or patient care, reasonable contributions for purposes of promotion is achieved when the cumulative performance rating is at least “satisfactory” in their current academic work. **Excellent** performance by an assistant professor has the same criteria as **good** performance by an associate professor and a **satisfactory** by a professor. “Several” means two criteria. “Multiple means at least three or more criteria.

[NOTE: The word ‘several’ has been changed to ‘two’ and ‘multiple’ has been changed to ‘more than two’]

	Assistant Professor	Associate Professor	Professor
Satisfactory Performance	Two Level I	More than two Level I Two Level II	More than two Level I More than two Level II Two Level III
Good Performance	More than two Level I Two Level II	More than two Level I More than two Level II Two Level III	More than two Level I More than two Level II More than two Level III
Excellent Performance	More than two Level I More than two Level II Two Level III	More than two Level I More than two Level II More than two Level III	More than two Level I More than two Level II More than two Level III One Level IV

In other words, assistant professors demonstrate **satisfactory** performance in each category by meeting two level I criteria. Associate professors demonstrate **satisfactory** performance by meeting more than two Level I criteria and two Level II criteria. Professors demonstrate **satisfactory** performance by meeting more than two Level I and II criteria and two Level III criteria.

**Good** performance is demonstrated by meeting satisfactory criteria for a rank higher than one's current rank. Meeting more than two Level I & II criteria and two Level III criteria demonstrate **good** performance for an associate professor. A professor shall meet more than two Level I, II & III criteria and one Level IV criteria to demonstrate **excellent** performance. The Annual Evaluation should evaluate and document performance in all categories of contribution: teaching, research, service and patient care. For merit purposes, an overall evaluation of the faculty member's performance should be given that is a weighted-average of the assigned and evaluated categories. Faculty with a predominance of assignments in one or two categories are expected to meet a greater number of criteria than are listed in the preceding chart. Such increased performance in a particular category should be determined at the time the Faculty Activity and Contribution worksheet is completed. For example, an associate professor that is assigned 70% of their efforts in teaching might be expected to meet more than two Level I and II criteria rather than the listed more than two Level I and two Level II criteria.

Work in categories of contribution where no effort has been assigned may improve the faculty members overall evaluation, only if that faculty member has, at minimum, a satisfactory evaluation in all categories where effort has been assigned. Note: unsatisfactory performance in a particular category will not be offset by efforts outside the faculty member's assigned efforts. Promotion, tenure and merit pay are not expected when satisfactory performance is the predominant evaluation. Satisfactory performance is not evidence of significant contributions to the School of Dentistry. Typically, good performance in recent years is evidence of significant contributions to the School of Dentistry. It is important to note that while many activities overlap in more than one category of contribution (teaching, research, service and patient care); faculty will be given credit in only one category as detailed in this document. Two exceptions are recognized. One is the maintenance of dental and specialty licenses. The second is professional development. The same activity shall satisfy the criteria in both categories.

Satisfying more than two Level I criteria does not equate to meeting a Level II or other higher Level criteria. On the other hand, meeting a single Level IV criterion is equivalent to more than two Level III criteria, a single Level III criterion is equivalent to more than two Level II criteria, and so forth.

## **B. Criteria for each category**

### **TEACHING** Effective classroom, laboratory or clinical teaching (required)

evidenced by such things as:

All Regular student evaluations as described in the School of Dentistry Guidelines.

All Follows and enforces appropriate OSHA, quality assurance and patient care guidelines.

All On-time and prepared for all assigned teaching and clinical responsibilities.

I Supports other SOD faculty's teaching effort by giving guest lectures. II

Positive supervisor's evaluation

III Positive evaluation by an education specialist from inside/outside the School of Dentistry.

III School of Dentistry teaching award

III Nominated for the WVU Outstanding Teaching Award

IV Awarded the WVU Teaching Outstanding Award

Manage assigned teaching responsibilities:

All Demonstrate content competence

All Incorporates sound educational principles in teaching

II Effectively manages course content and schedule (as documented by Director or Chairman)

Design of innovative instructional materials and/or strategies such as:

II Development and implementation of innovative instructional strategies such as resource material, computer-based, and/or audiovisual material

II New preparation or notable revision of syllabi, manual, study guide self-instructional package, by an appropriate administrator including documentation

III Formal assignment of effectiveness as a mentor for faculty of the School of Dentistry

Effective educational administration as documented by the appropriate administrator

III Supervises team leaders

III Supervises or directs clinical curriculum (i.e., clinic supervisor, team leader

IV Direct a program, division, or department

IV A notable (at least \$10K) extramural grant to support an educational program as principle investigator

Indirect contributions to the quality of teaching efforts through educational development evidenced by such things as:

All Maintains appropriate licenses necessary for clinical teaching responsibilities

All Attendance at a professional meeting; continuing education course, workshop or symposium

I Pursuance of specialty board where appropriate

II Becomes board eligible by meeting criteria other than finishing a program

II Advanced university-based course-work related to professional responsibilities

II Significant (more than 18 hours) continuing education focusing on specialty area

III Attainment of specialty board where appropriate III Attains Fellowship status in a professional organization

IV Completes a degree program related to professional responsibilities Teaching efforts outside of the dental curriculum:

II Development and presentation of courses in the School of Dentistry Continuing Education Program

II Presentation of lectures and/or seminars for other units within the University

Professional presentations to groups outside WVU including:

I Presentation of lectures, workshops, and symposia to lay groups

- I Presentation of scholarly programs to local dental or other professional societies
- II Presentation of scholarly programs to regional and state dental or other professional societies
- III Scholarly presentations under the auspices of another University
- III Invited scholarly presentations to national dental or other profession societies (letter of invitation should be included as part of the document)
- IV Invited scholarly program (> one hour) to national dental or other professional organizations (letter of invitation should be included as part of the document)

Other special efforts which can be shown to assist in realizing the educational objectives of the School of Dentistry:

- I Supervision of student table clinics, presentations and other efforts
- II Documented effectiveness as student academic advisor

Note: Teaching is to be evaluated in terms of quality and quantity of teaching efforts.

## **RESEARCH<sub>2</sub> AND SCHOLARLY ACTIVITY**

Scholarly Activity - (See "Definition of Terms" Section)

Relevant Publication(s)

- I Publication of scholarly activities in abstract form
- II Literature review resulting in a publication
- II Publication of a chapter in a textbook
- II Publication of case studies, surveys, clinical techniques or innovative educational strategies
- II Review of scholarly manuscripts for a professional journal
- III A combination of publications of chapters, case studies, surveys, clinical techniques or innovative educational strategies
- IV Publication of a textbook as author or editor

Conducts research involving the creation and synthesis of knowledge:

All Follows appropriate OSHA, IRB and other Research guidelines

- I Assists other faculty with research project headed by others

- II Implementation of one research project as principal investigator

- II Mentors (with documentation) other faculty members with research project

<sup>2</sup> If research is one of the categories of significant contribution, external evaluation is required.

See University guidelines for conducting external reviews. Research is defined as the creation and synthesis of knowledge typically using the scientific method or a theoretical model.

Usually research involves the collection and analysis of data.

Peer reviewed publication of your research efforts:

- I Publication of one abstract

- I Acknowledgement of assistance of others with research

- II Publication of more than one abstract

- II Publication of research in a textbook or chapter therein<sup>3</sup>

- II Publication of one manuscript<sup>3</sup> III Publication of more than one manuscript

- IV A record of peer reviewed publications focused on a specialized area that make a significant contribution to Dentistry

Peer reviewed presentation of your research efforts:

- I Presentation of research efforts to the School of Dentistry

- II Presentation of research efforts to other units of WVU

- III Presentation of research efforts outside WVU

- III Invited research programs (< one hour) to national dental or other professional organizations (letter of invitation should be included as part of the documentation)

- IV Invited presentation or research programs (> one hour) to national dental or other organizations

Obtains research support with grants and contracts:

I A research protocol approved for intramural funding  
 II A research protocol approved for extramural funding  
 III A notable research protocol (so designated by the Dean for Research) submitted for extramural funding  
 IV A notable (at least \$20K) extramural research grant as principal investigator<sup>3</sup>  
 IV A record of significant national or international funding for research  
 Supervises student research:  
 I Supervision of student research II Attains or maintains appointment on Graduate Faculty I  
 I Consults or assists with graduate student research  
 II Serves on a master's thesis committee of the School of Dentistry  
 III Supervision of graduate student research as chair of committee  
 III Serves on masters or doctoral committee of other units of WVU or other universities.  
 Service and administrative responsibilities related to research  
 II Review of research manuscripts or abstracts for a peer reviewed journal or national meeting  
 II Administrative duties related to research or research space  
 III Service on an external grants review committee  
 IV Service on a NIH study section  
<sup>3</sup> If research is an area of significant contribution, one of the items marked with this footnote should be periodically (every 1-3 years) accomplished for promotion, tenure, or merit salary adjustments. If not already in print, letters that unconditionally accept manuscripts, book chapters, etc. will be counted.  
 Note: Research efforts are to be evaluated in terms of quality and faculty member's involvement.

## **SERVICE<sup>4</sup>**

Documented consultative services to:  
 II Health practitioners of the State  
 III Health practitioners of the region  
 IV National or international consultation services  
 Special contributions such as:  
 All Participate in school committees  
 I Participate in division, department and School of Dentistry programs and meetings  
 I Completes assigned division and departmental tasks  
 II Notable service on school committees as documented by committee chair  
 II Service on HSC and university committees  
 III Notable service on HSC and university committees  
 III Advisory services to university student organizations  
 III Notable service on school committee as chair as documented by Dean III  
 Notable performance of delegated administrative responsibilities as evaluated by supervisor  
 III An extramural service grant  
 IV A notable (at least \$10K) extramural service grant.  
 Professional leadership outside WVU including:  
 I Participation in local, regional, state and national dental and other health-related groups  
 II Publishes one book review or editorial in peer reviewed journals  
 II Office of a local dental, regional or other health-related groups  
 III Office of a state dental, national or other health-related groups  
 III State recognition of service activities  
 III Review abstracts, grants or other consultations for a professional organization



III Publishes more than one book review or editorial in peer reviewed journal I

V National recognition of service activities

IV Review grants or other consultations for a federal organization

Note: Service is to be evaluated in terms of quality and quantity of the service efforts.

<sup>4</sup> A record of satisfactory annual evaluations in service shall be evidence of reasonable contributions. A record of good or better evaluations in service shall be evidence of significant contributions. <sup>5</sup> Patient Care is a separate area for annual evaluation. Patient Care is a subcategory of Service for Promotion and Tenure evaluations.

## **PATIENT CARE <sup>5</sup>**

Direct patient service (if assigned):

All Provides patient care in the faculty practice, University Hospitals and other HSC clinics

All Clinical professional development

All Maintains West Virginia Dental or Dental Hygiene License and Hospital Privileges

All Maintains West Virginia Specialty License when appropriate

All Follows appropriate OSHA and patient care guidelines

All 75% of allotted chair time is utilized<sup>6</sup>

Patient care will be measured in terms of quality and productivity by the Chair and the Quality Assurance Committee. Meeting every criterion listed under "Direct patient services" will result in a performance evaluation of satisfactory. Criteria for good and excellent performance will be developed in each department by the chair, published annually and approved by the Faculty Evaluation Committee and the Dean.

**C. Note:** Special activities, awards and peer recognition in a professional field and its associations will be recognized in all categories. Contributions not listed in these guidelines but of equivalent value to the School of Dentistry or the University to one of those listed will be given equivalent weight.

## **V. INSTRUCTIONS FOR THE APPLICATION OF THE GUIDELINES FOR ANNUAL EVALUATION, PROMOTION AND/OR TENURE, FULL-TIME FACULTY**

1. Promotion to the Rank of Associate Professor: a) At least in one's sixth year at the rank of Assistant Professor in this institution at the time of the evaluation cycle. b) A predominance of good or excellent annual evaluations in recent years. c) For tenure-track faculty, documented evidence of significant contributions in research and teaching, and reasonable contributions in service, unless officially modified. d) For clinical-track faculty, documented evidence of significant contributions in teaching and service.

2. Promotion to the Rank of Professor: a) At least in one's fifth year at the rank of Associate Professor in this institution at the time of the evaluation cycle. <sup>6</sup> New Faculty will be exempt for their first year. b) A predominance of good or excellent annual evaluations in recent years. c) For tenure-track faculty, documented evidence of significant contributions in research and teaching, and reasonable contributions in service, unless officially modified. d) For clinical-track faculty, documented evidence of significant contributions in teaching and service.

## **VI. GUIDELINES FOR ANNUAL REVIEW AND PROMOTION IN RANK: NON-TENURE TRACK, PART-TIME SALARIED FACULTY**

**A. Part-time faculty members who are being recommended for promotion:**

1. The result of the departmental and School peer evaluation of individuals in this category shall go to the Office of the Dean. Written notification of the promotion will then be issued over the signature of the Dean.

2. For part-time faculty the following equivalencies for service may be granted: a. < .5 FTE would require 2 years of service to equal one year full time. b. > .6 FTE is equivalent to one year full time This action must be approved by the appropriate departmental chairperson, the School of Dentistry Faculty Evaluation Committee and the Dean.

3. The guidelines for promotion recommendations are as follows:

a) Promotion to the Rank of Clinical Assistant Professor: (1) At least 4 years at the rank of Clinical Instructor in this institution at the time of the evaluation cycle, and (2) Meritorious performance in contributing to the goals and objectives of the department as determined by the chairperson (with assistance from the departmental committee if appropriate) in concurrence with the Faculty Evaluation Committee and the Dean. (3) Meets criteria labeled “All” in categories of assigned responsibilities, teaching (and for some part-time faculty, service and/or patient care).

b) Promotion to the Rank of Clinical Associate Professor: (1) At least 6 years at the rank of Clinical Assistant Professor in this institution at the time of the evaluation cycle, and (2) Meritorious performance in contributing to the goals and objectives of the department as determined by the chairperson (with assistance from the departmental committee if appropriate) in concurrence with the Faculty Evaluation Committee and the Dean.

c) Promotion to the Rank of Clinical Professor: (1) At least 10 years at the rank of Clinical Associate Professor in this institution at the time of the evaluation cycle, and (2) Meritorious performance in contributing to the goals and objectives of the department as determined by the chairperson (with assistance from the departmental committee if appropriate) in concurrence with the Faculty Evaluation Committee and the Dean. (3) Meets criteria labeled “All” in categories of assigned responsibilities, teaching (and for some part-time faculty, service and/or patient care).

**B. Part-time faculty members not being recommended for promotion or termination:** Individuals in this category shall be subject to annual evaluation by the departmental chairperson (and a peer committee). Notification, in writing, of the outcome of this review shall be made to the individual over the signature of the chairperson with a copy to the Dean. Such notification will serve as the only notice of intent to renew the individual’s contract for the subsequent year.

## **VII. DEFINITION OF TERMS**

“All” means all full-time faculty regardless of rank and track.

“Professional” means dental or other activity directly related to the Mission of the School of Dentistry.

“Category” means specifically means one of the following: teaching, research, service or patient care.

Satisfactory – characterizing performance sufficient to justify continuation but not necessarily sufficient to justify promotion or tenure.

Good – characterizing performance of merit.

Excellent – characterizing performance of high merit.

Significant – see page 4

Reasonable – see page 4

Scholarly Activity – scholarship and research contributions that pertain to areas by way of example such as pedagogy, educational psychology and educational methods.

Manuscript – full length paper or article.

**WO** No response submitted

C. If your institution has clinical tracks, what are the expected standard levels for each level?

**CWRU** No response submitted

**UDM** Clinical Assistant Professor: There is no requirement for scholarly activity.  
Clinical Associate Professor: There is no requirement for scholarly activity.  
Clinical Professor: There is no requirement for scholarly activity.

**UIC** The promotion of non-tenured clinical track faculty is governed by the following Norms, Expectations, and Standards of Excellence.

**Description of the Non-Tenured Clinical Teaching (NT-CT) Track**

The NT-CT track is used in the clinical departments for faculty who demonstrate excellence in Teaching, Patient Care/Clinically-related Activities (CRA), Service, and Scholarship. These faculty are engaged in scholarly activity as it relates to teaching, patient care, and service, but may have little or no direct involvement in research and publication. The NT-CT faculty members are on fixed term appointments (0-100%) and are not on the University tenure track. NT-CT faculty members are usually dentists, but may be other professionals involved in clinically related activities.

Appointment or promotion of faculty in the NT-CT track depends primarily on Teaching, Patient Care/CRA, and Service. At the **Clinical Assistant Professor** rank, a commitment to Teaching and Service must be evident; appointment or promotion to **Clinical Associate Professor** or **Clinical Professor** requires clear documentation of excellence in Teaching, Patient Care/CRA, and Service. In addition, Scholarship, or scholarly activity related to the Teaching, Patient Care/CRA, and Service, is expected for promotion to **Clinical Professor**. Promotion in the NT-CT track is not awarded solely upon years in rank, but is based upon an assessment of progression during the career in the areas of Teaching, Patient Care/CRA, Service, and Scholarship. Scholarship activity will be considered in its broadest sense when applied to the non-tenure clinical track and will include documentation of excellence and recognition of performance (see document titled: *Non-Tenure Clinical Track, Faculty-Examples for Dossier Preparation*).

The Promotion Committee for Non-Tenure Clinical Teaching (NT-CT) faculty will be constituted of the Department Heads of the College's seven clinical departments. Dossier preparation guidelines will be developed by this NT-CT Promotion Committee. The Committee will annually elect its Chairperson from the membership.

**Clinical Assistant Professor:** Normally faculty at this rank will have participated actively for at least two years in clinical teaching or have completed training in an ADA-recognized specialty, or have completed an Advanced Education training program in general dentistry. Alternatively, faculty will have earned a degree in another discipline.

**Appointment** to the Rank of Clinical Assistant Professor is recommended when the NT-CT faculty member presents with a distribution between the areas of Teaching, Patient Care/CRA, and Service that is appropriate to his/her assigned role in the Department. Additional time in rank may be required for NT-CT faculty with a part-time commitment.

There must also be a reasonable expectation that the academic career of the candidate will continue.

- Demonstrated competence in Teaching.
- Demonstrated competence in Patient Care, when appropriate, or equivalent Clinically-related Activities.
- Demonstrated competence in Department or College professional activities consistent with College Mission Statement.

**Clinical Associate Professor:** Faculty at this rank must have demonstrated sustained commitment to and excellence in Teaching, Patient Care/CRA, and Service, within the College of Dentistry. It is expected that this will include acceptance of ongoing assignments in one or more of these areas. In addition, candidates must demonstrate expertise, excellence and scholarly activity as it relates to Teaching, Patient Care/CRA, and Service, although publications are not essential. Faculty at this rank must have served as a Clinical Assistant Professor for a period of no less than five years for a full-time commitment. Additional time in rank may be required for NT-CT faculty with a part-time commitment. There must also be a reasonable expectation that the academic career of the candidate will continue.

**Promotion** to the Rank of Clinical Associate Professor is recommended when the NT-CT faculty member presents with a distribution between the areas of Teaching, Patient Care/CRA, and Service that is appropriate to his/her assigned role in the Department.

- Demonstrated excellence in Teaching
- Demonstrated excellence in Patient Care, when appropriate or equivalent Clinically-related Activities.
- Demonstrated excellence in Department, College, University and professional Service activities consistent with College and University Mission Statements
- Evidence of Scholarship, or scholarly activity, as related to Teaching, Patient Care/CRA, and Service, although documented publications are not necessary.

**Clinical Professor:** Faculty at this rank must have documented excellence in all four areas of Teaching, Patient Care/CRA, Service, and Scholarship in the context of their assigned roles in their Department. It is expected that Scholarship will include documented publications. Faculty at this rank must have served as a Clinical Associate Professor for a period of no less than five years for a full-time commitment. Additional time in rank may be required for NT-CT faculty with a part-time commitment. There must also be a reasonable expectation that the academic career of the candidate will continue.

**Promotion** to the Rank of Clinical Professor is recommended when the NT-CT faculty member has met the following requirements:

- Excellence at the highest level in 2 or more areas of Teaching, Patient Care/CRA, Service, and Scholarship.
- Evidence of scholarly publications, in peer-reviewed or non-peer reviewed journals.
- Achievement of recognition by peers at the College, University, and/or national/international level.
- Candidates should achieve Board Certification (American or State Specialty) when appropriate, or equivalent recognition for a general dentist.

- IND** Yes, clinical tracks are available but the standards seem to be the same as tenure track. See response to previous section.
- MICH** No response submitted
- MID** The standards mentioned in the previous section are the standards for the clinical track.
- OSU** No response submitted
- PITT** See response to previous section.
- UB** All clinical faculty are expected to demonstrate proficiency in and dedication to the education of students and service to the school, institution, profession and/or society. Although creative scholarship and research is not a specific requirement, faculty must maintain and expand their knowledge of the research and scholarship reported by others in their discipline. In addition, maintenance of clinical skills is expected for those rendering patient care and teaching in the clinical environment. Furthermore, it is expected that such faculty will have demonstrated their ability in spoken and/or published communication.
- WVU** They are expected to do scholarly activity but the faculty are not sure the level and the amount. Please see response to previous section.
- WO** No response submitted

## **V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

- A.** What, if any, are the implications of the following article? Summarize and report the discussion.

*Dental Composite Restorations and Psychosocial Function in Children.* Maserejian Nancy N., Trachtenberg Felicia L., Hauser Russ, McKinlay Sonja, Shrader Peter, Tavares Mary, and Bellinger David C. Pediatrics originally published online July 16, 2012. DOI: 10.1542/peds.2011-3374.  
<http://pediatrics.aappublications.org/content/early/2012/07/11/peds.2011-3374.full.pdf+html>

**CWRU** No response submitted

**UDM** The article was discussed informally with our dental materials person. We agreed that it was interesting and joked that maybe now our patients will want their composites removed and replaced with amalgam. Unnecessary replacement of amalgam restorations purely for esthetics should be taken more seriously.

- UIC** **Official statement from the American Academy of Pediatric Dentistry:**  
The most significant window of potential exposure to BPA is immediately following the application of resin-based dental sealants and composites. Based on current evidence, the US Food and Drug Administration (FDA) and the American Dental Association (ADA) do not believe there is a basis for health concerns relative to BPA exposure from any dental material and have concluded that any low-level of BPA exposure that may result from dental sealants and/or composites poses no known health threat.  
**Recommendations:** Measures can be taken to reduce potential BPA exposure from dental materials. Techniques are directed at removing the residual monomer layer immediately after placement of dental sealants and composites. Recommendations include rubbing the newly applied dental sealant or composite with pumice on a cotton roll and thoroughly rinsing with water using an air-water syringe or having the patient rinse for 30 seconds and spit after the dental procedure. Also, use of rubber dam isolation would further limit potential exposure.  
There haven't been any changes or implications in our pediatric clinics related to this evidence. Students are encouraged to follow the above recommendations.
- IND** We thought it interesting, but our research personnel described it as "not hard data."
- MICH** No response submitted
- MID** No response submitted
- OSU** No response submitted
- PITT** In reference to the article, Dental Composite Restorations and Psychosocial Function in Children, the position of the Pediatric Department at Pitt University Dental School concludes the study merits further investigation with increase sample size over an increase period of time. Several psychosocial variables exist making it difficult to determine a direct cause and effect relationship between BisGMA and its psychosocial impact on children. In 2008, the Pediatric Department at Pitt University Dental School began using dental sealants without BisGMA as per the American Academy of Pediatric Dentists. The Pediatric Department will place both posterior amalgams and composites. They have found more composites placed in the last 5 years due to parents request and Pennsylvania Medicaid covering posterior composites. If the lesion is only on the occlusal surface and a posterior composite is placed, it is covered by a dental sealant to seal off the composite from the oral cavity. The Pediatric Department prefers placing amalgam on posterior teeth and if a class II preparation becomes large, a stainless steel crown would be considered as a definitive restoration.
- UB** The implications are that unnecessary replacement of amalgam restorations should be reassessed as resins are more prone to chemical and mechanical breakdown overtime, and amalgam removal produces a transient increase in mercury plasma levels.
- WVU** This might help slow the march to bond-o-dontics.
- WO** No response submitted

B. In the last five years, has your College/School made policy changes that impact/restrict the utilization of amalgam? If yes, what are the changes and the rationale for such changes?

**CWRU** No response submitted

**UDM** No.

**UIC** In the last five years, our College has not made any policy changes that impact/restrict the utilization of amalgam. However, performed amalgam restorations have decreased in clinics compared to resin-based composite restorations.

Procedure	2007	2012
D2140 1 surface amalgam	726	407
D2150 2 surface amalgam	1192	674
D2160 3 surface amalgam	469	252
D2161 4 surface amalgam	54	32
<b>TOTAL AMALGAMS</b>	<b>2441</b>	<b>1365</b>
D2391 1 surface composite	2348	2740
D2392 2 surface composite	1206	1680
D2393 3 surface composite	258	376
D2394 4 surface composite	68	47
<b>TOTAL COMPOSITES</b>	<b>3880</b>	<b>4843</b>

45% reduction of posterior amalgams compared to 5 years ago (2007).

25% increase of posterior composite compared to 2007.

**IND** Not at al. We think resins are over utilized.

**MICH** No response submitted

**MID** No

**OSU** No response submitted

**PITT** See response to previous question

**UB** No formal policy changes in regards to use of amalgam in the last five years, but its use has decreased in our clinics.

**WVU** No

**WO** No response submitted

## VI. REGIONAL CODE AGENDA

*To be established by the respective Region and Regional Director. Please also report on responses to the Regional Agenda by all participants.*

**No Regional Agenda Submitted**

# **Consortium of Operative Dentistry Educators**

## **(CODE)**



### **REGION V (NORTHEAST) ANNUAL REPORTS**

Region V Director:  
Dr. Richard Lichtenthal  
Columbia University  
New York, NY

Region V Annual Meeting Host:  
Dr. Richard Lichtenthal  
Columbia University  
New York, NY

Region V Annual Report Editor:  
Dr. Richard Lichtenthal

Chapter 5



## CODE REGIONAL MEETING REPORT FORM

**REGION** V Northeast

### LOCATION AND DATE OF MEETING:

University: Columbia University

Address: New York, NY

Date: October 3 -4, 2012

### CHAIRPERSON:

Name: Dr. Richard Lichtenthal

Phone #: 212-305-9898

University: Columbia University

Fax #: 212-305-8493

Address: New York, NY 10032

E-mail: rml1@columbia.edu

**List of Attendees:** Please complete the CODE Regional Attendees Form (following page)

### Suggested Agenda Items for Next Year:

No suggestions submitted

### LOCATION AND DATE OF NEXT REGIONAL MEETING:

Name: Dr. Richard Lichtenthal

Phone #: 212-305-9898

University: Columbia University

Fax #: 212-305-8493

Address: New York, NY 10032

E-mail: rml1@columbia.edu

Date: TBD

Please return all completed enclosures to  
Dr. Larry D. Haisch, National Director, UNMC College of Dentistry;  
40<sup>th</sup> and Holdrege Streets; Lincoln, NE 68583-0740.

**Deadline for return: 30 Days post-meeting**

Office: 402 472-1290 Fax: 402 472-5290 E-mail: lhaisch@unmc.edu

Also send the information on a disk and via e-mail with all attachments.

Please indicate the software program and version utilized for your reports.

## CODE Region \_V\_ Attendees Form

NAME	UNIVERSITY	PHONE #	FAX #	E-MAIL ADDRESS
Richard Lichtenthal	Columbia			rml1@columbia.edu
James Kaim	NYU			jmk2@nyu.edu
Stan Freeman	Columbia			spf2@columbia.edu
David Newitter	U. Connecticut			newitter@nso2.uchc.edu
Melissa Ing	Tufts			melissa.ing2tufts.edu
Margrit Maggio	U. Pennsylvania			mmaggio@pobox.upenn.edu
James LoPresti	NYU			jjtl1@nyu.edu
George Keleher	Boston U.			gkeleher@bu.edu
Eric Levine	U. Maryland			elevine@umaryland.edu
Jimmy Kilimitzoglou	StonyBrook			dkilimitz@gmail.com
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Kenneth Boberick	Temple			kboberick@dental.temple.edu
Cheryl Fryer	Howard			cfryer@howard.edu
Farhad Hadavi	Columbia			fh27@columbia.edu
Michelle Mirsky	Columbia			msm80@columbia.edu
Marc Wolff	NYU			mark.wolff@nyu.edu
Peter Yaman	U. Michigan			pyam@umich.edu
Ann Nasti	StonyBrook			anastidmd@aol.com
Andrew Schenkel	NYU			abs5@nyu.edu
David Glotzer	NYU			dlg2@nyu.edu
John Drummond	McGill			john.drummond@mcgill.ca

**2012 NATIONAL CODE AGENDA  
REGION V  
SUMMARY RESPONSES TO NATIONAL AGENDA**

**(Editor Note: Questions condensed for printing purposes)**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

**I. MILLENNIAL IMPACT**

**Classroom/Didactic Experiences**

Every school in the region has changed the way they teach the didactic, pre-clinical and clinical component of restorative dentistry over the last 10 -12 years. Some significantly, some subtly, but all have changed. Some were due to the differences found in the learning habits of the millennial students and the demands of meeting those differences, but many were determined by those same influences affecting teaching faculty who, being tech savvy as well, have evolved, as they should, to improve and expand educational and patient care techniques.

**Pre-Clinical Laboratory Experiences**

All schools in the region have changed the pre-clinical component of teaching restorative dentistry during the last 10-12 years. These changes have encompassed the physical environment in which the laboratory phase of preclinical restorative dentistry is taught, the simulation equipment utilized, the formats for providing information have been expanding annually and the preclinical experience has taken a path closer to case based clinical care.

**Clinical Experiences**

All schools in the region have made some changes in the way clinical teaching is conducted. Grading systems, different names for requirements for progress toward graduation, increasing competency/skill assessments, changes in student/faculty ratios and group practice models are apparent. The insertion of the electronic health record and computer generated student records have altered the way in which students are monitored. Patient care remains the focus of all teaching institution.

**II. DIGITAL DENTISTRY**

All schools in the region have incorporated digital dentistry, in all forms, into their curricula. Some schools to a greater extent than others. All seem to use the digital techniques as an augmentation to, not a replacement of, traditional techniques. It is generally agreed that students are generally very excited by digital technology. It is also apparent that faculty training and utilization of the digital technology is not yet universal.

**III.RESTORATIVE DENTISTRY**

For the most part all schools in the region try to use the same techniques and materials, where possible, in the clinics as used in the pre-clinic. The demands of patient centered clinical care can, at times, dictate variation.

**IV.SCHOLASTIC**

Schools in the region generally agree that research/grants, publications, presentations and established teaching portfolios generally make up the bulk of “scholarly activity”. Each school has a slightly different focus and requirements for promotion as well as differences for tenure and clinical track appointees.

## **V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

The research is not sufficient to come to any conclusions. Many composites currently in use do not have a Bis-GMA base.

## **VI. REGIONAL CODE AGENDA**

**2012 NATIONAL CODE AGENDA**  
**REGION V RESPONSES**  
*(Evidence cited where applicable)*  
*October 3 - 4, 2012*

**Region V School Abbreviations**

<b>BU</b>	<b>Boston University</b>	<b>PENN</b>	<b>University of Pennsylvania</b>
<b>CLMB</b>	<b>Columbia University</b>	<b>SUNY</b>	<b>State University of NY - Stony Brook</b>
<b>CONN</b>	<b>University of Connecticut</b>	<b>TEMP</b>	<b>Temple University</b>
<b>DAL</b>	<b>Dalhousie University</b>	<b>TUFT</b>	<b>Tufts University</b>
<b>HARV</b>	<b>Harvard University</b>	<b>UMD</b>	<b>University of Maryland</b>
<b>HOW</b>	<b>Howard University</b>	<b>UMNJ</b>	<b>University of New Jersey</b>
<b>LAV</b>	<b>University of Laval</b>	<b>UMON</b>	<b>University of Montreal</b>
<b>MCG</b>	<b>McGill University</b>	<b>USN</b>	<b>US Naval Dental School</b>
<b>NYU</b>	<b>New York University</b>	<b>UTOR</b>	<b>University of Toronto</b>

**2012 NATIONAL CODE AGENDA**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

**Background:**

During a recent ADEA (American Dental Education Association) board meeting in Washington, D.C., 40 millennial dental students discussed their perceived strengths and weaknesses and other trends to shed light on how schools can provide better dental education. Millennials are those students born between 1979 and 1994. The dental students said they use technology constantly to access information, conduct business and stay in touch, and that the Internet, text messaging, digital music, and downloads were all vital to their lives. The students expressed a preference for the ease of use of technology, but wanted to ensure that personal interaction remained a key part of their learning experiences. Many students indicated that their best academic experiences were those that involved a great deal of hands-on learning and allowed them to study in a group setting. The students also felt strongly that the best professors were those who care whether students were learning class materials, rather than just memorizing them, and those who made themselves available for help when necessary.

**Millennial Generation (Generation Y):**

1. **Definition:** a term used to refer to the generation, born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.
2. **Common Traits:**
  - **Tech-Savy:** Generation Y grew up with technology and rely on it to perform their jobs better. Armed with BlackBerrys, laptops, cellphones, and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through e-mail and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations.
  - **Family-Centric:** The fast-track has lost much of its appeal for Generation Y who is willing to trade high pay for fewer billable hours, flexible schedules and a better work/life balance. While older generation s may view this attitude as narcissistic or lacking commitment, discipline and drive, Generation Y have a different vision of workplace

- expectations and prioritize family over work.
- **Achievement-Oriented:** Nurtured and pampered by parents who did not want to make the mistakes of the previous generation, Generation Y is confident, ambitious, and achievement-oriented. They have high expectations of their employers, seek out new challenges and are not afraid to question authority. Generation Y wants meaningful work and a solid learning curve.
- **Team-oriented:** As children, Generation Y participated in team sports play groups, and other group activities. They value teamwork and seek the input and affirmation of others. Part of a no-person-left-behind generation, Generation Y is loyal, committed and wants to be included and involved.
- **Attention-Craving:** Generation Y craves attention in the forms of feedback and guidance. They appreciate being kept in the loop and seek frequent praise and reassurance. Generation Y may benefit greatly from mentors who can help guide and develop their young career.

## I. MILLENNIAL IMPACT

### A. Classroom/Didactic Experiences

1. Has the way your department teaches the didactic component of restorative dentistry theory or concepts changed significantly in the last 10-12 years? (e.g. traditional class lectures replaced with small group discussion session, or most of the didactic curriculum is delivered on-line).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**BU** The format and hours are unchanged: first a lecture, then an extended lab session. The resources have changed: all lectures are taped and notes are on Powerpoint. All materials are on Blackboard. Sides and tapes are available 100% of the time. We believe that D1 and D2 material is best taught in lecture. D3 and D4 continue to be taught in small groups. Content has changed as restorative materials change. The style and methods have. "Clicker response" was tried and rejected. Students do not object to didactic presentations.

**CLMB** Yes, video recorded lectures, video technique, student/faculty blogs, - all available on-line 24 hours a day. Video and sound recorded lectures, laboratory demonstrations and materials technique, Courseworks - all power point slides on intranet, on line quiz and examinations with instant feedback (almost). Most curricular changes as well as changes in delivery were due, not to the ever changing, entitlement generated demands of the "millennial student" but by a faculty who have become more tech savvy themselves, and using the available newly technological advances have improved the teaching methodology.

**CONN** No response submitted

**DAL** No response submitted

**HARV** No response submitted

**HOW** Most restorative didactic classes remain traditional lectures though several teachers have introduced small group discussion sessions. Some have incorporated student blogs into their curricula. At the August 2012 retreat the faculty was charged with establishing small group discussion sessions in their didactic courses. The blogs have been the most significant change due to the generational characteristics in our current student population. If a student receives one F in a didactic course during the year, he/she must repeat the year. This represents a change in the philosophy of the leadership. Students must pass part II of the national board to be eligible for graduation. Patient records are now kept in a digital format due to the available technology. The college uses Exam Soft for all didactic examinations. This change was due to available technology and limited support staff.

**LAV** No response submitted

**MCG** No response submitted

**NYU** In several courses the number of traditional lectures has been reduced and replaced with active learning in small group settings. Didactic instruction has become more relevant which is of utmost importance to millennial learners. Both curriculum and assessment has been modified to include case based scenarios. Dental Anatomy instruction as shifted from the traditional emphasis on wax ups and memorization to a more user friendly experience with faculty facilitators instructing small groups. This successful first year program is being expanded this year to the second year restorative course. More frequent feedback is being given to students. Required weekly online quizzes of dental anatomy and operative dentistry has had multiple positive outcomes –responding to the needs of today’s students and positively impacting national board scores. All course materials are available on line. Videos of all procedures are available to students. Podcasts of all lectures are available almost immediately to students. More frequent communication with students – 24 hour posting of exam grades. Because cheating is on the rise due to technology and by differing views of this generation of what exactly constitutes cheating, multiple versions of every exam are given to discourage cheating and other unethical behavior. Frequent communication, quizzing, videos, small group instruction, multiple exam versions. This is a tough one because many reasons for changing were multi-factorial due to student demands and interest, leadership changes and improved technological capability - e.g. Podcasting.

**PENN** Yes. Specific to Operative Dentistry: Blended learning has been heavily incorporated into the curriculum.

1. On line, narrated video demonstrations (recorded using the dental microscope) of all preparations and restorations performed during the course are made available prior to each procedure. Tracking of access to these resources shows high levels of use at all times of the day.
2. Interactive online lecture videos with interactive quizzes for all didactic lectures. Tracking of access to these resources shows high levels of use at all times of the day.

3. Interactive, on line Dental Anatomy software used for Dental Anatomy module of Operative Dentistry Course. Survey relative to the use of this resource shows high levels of use at all times of the day.
4. Interactive on line Dental Anatomy lecture videos with interactive quizzes. Tracking of access to these resources shows high levels of use at all times of the day.
5. Interactive online Human occlusion and TMJ software used for Occlusion module of Operative Dentistry Course. Survey relative to use of this resource shows high levels of use at all times of the day.
6. Interactive online lecture videos with interactive quizzes on human occlusion and TMJ. Tracking of access to this resource shows high levels of use at all times of the day.
7. Online resources – URL Links to evidence based literature relative to topics addressed
8. Addition of seminars to foster interaction and understanding.

All of the listed above: although changes were implemented to engage the “new, non-linear learner”. They would not have been possible without the technology advances, software now available, or IT infrastructure now in place at our institution.

**SUNY** Students were given the option of self-study through on-line information lectures and students preferred lectures in our simulation lab. Incorporation of supplemental instruction (SI). Attention craving characteristic of generation Y drove the development of the supplemental instruction program at StonyBrook. Although the tech-savvy characteristic generation Y has required us to post all academic information on our C-base program, our students still insist upon lectures in technique classes (demonstrating the nurtured and pampered characteristic of generation Y students). Yes. The need to place more information on C-base in part is driven by their (students) intense and concentrated curriculum schedule.

**TEMP** No response submitted

**TUFT** We still have traditional class lectures which is lecture captured so it is available online for students to review additional times. Instructional videos available for viewing various procedures and materials and their directions have been produced and made available on line. We also started to incorporate interactive learning by producing a movie. The first feature movie topic was a bleaching film starring dental students who acted out the parts and thus had a very interactive learning experience. The class is broken up into smaller parts for practical instruction so the students have more attention from their assigned instructors and an opportunity to discuss as a team.

**UMD** Lecture attendance has declined over the last 10 years. Much of this may be attributed to the use of Mediasite, a school-supported recording of lecture content.

**UMNJ** No response submitted

**UMON** No response submitted

**USN** No response submitted

**UTOR** No response submitted



## **B. Pre-Clinical Laboratory Experiences**

1. Has the way your department teaches the pre-clinical laboratory component of restorative dentistry theory or concept changed significantly in the last 10-12 years? (e.g. traditional work benches replaced with high tech manikin labs or significant use of patient simulators, like DentSim).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**BU** The change to simulation was done 13 years ago. We use Kavo. Dent Sim has been tried and found not applicable to our needs. Each lab session is considered an appointment for the students' patient. Caries is placed in ivory teeth with wax. Not applicable, however, the D3 didactic course was eliminated and blended into D2 program. D1 is now an all year program. D1 and D2 actively assist in clinic.

**CLMB** The Preclinical component of teaching restorative dentistry has changed philosophically over the last three years. All preclinical education has been integrated into three multi-disciplinary courses with a case based preclinical didactic and laboratory format that more realistically brings the student into patient care in our general practice clinical model. The incorporation of almost all available means of information exchange that have been made available to students on an around the clock basis, as well as the ability to communicate directly with faculty on an around the clock basis seems to satisfy a particular need of the "millennial" student to always be "connected" Not all of the faculty feel that need. Most other changes had little to do with the requirements of the "millennial" student but rather the development of technology, the growth and development of faculty and administration, and the natural evolution of a forward thinking faculty.

**CONN** No response submitted

**DAL** No response submitted

**HARV** No response submitted

**HOW** Preclinical lab in restorative dentistry has changed significantly. High tech manikin labs were introduced in 2005. Students are encouraged to practice on their own i.e. lunch hour or any free time in their schedule. Their lab projects can be completed outside of the regularly scheduled class time. More exams are scheduled then had been in the 1990's. There is also more remediation. CEREC is introduced into the pre-clinical restorative lab. This was due to the availability of the technology and a desire for pre-clinical lab to reflect what is happening in the practice of dentistry.

**LAV** No response submitted

**MCG** No response submitted

- NYU** Yes, new simulation labs were constructed in 2001 that utilized Stagefront technology Elmo, individual student monitors, high speed suction, ergonomic units, etc. Efforts have been made to include CAD/CAM technologies in multiple courses, in particular esthetic dentistry, not only to illustrate the fabrication of ceramic restorations but also to give students a 3 dimensional modality to self-assess and peer assess restorative preparations. An integrated approach has been utilized for several preclinical courses. For example, in the 1990's preclinical orthodontics, endodontics, periodontics were largely taught in isolation. Today instruction in Invisalign technology is a combined effort of the departments of orthodontics and cariology and comp care. All students are now certified in Invisalign before graduation. Complex restorations I is an integrated course combining fixed prosthodontics, perio and endo. The instruction of operative dentistry has shifted markedly to one that emphasizes assessing caries risk and the treatment of a disease process and embraces minimally invasive surgical dentistry. Amalgam preparations are still being taught, but to a much lesser extent. Students are constantly reminded of the need to assess caries risk. Hard to distinguish among enhanced technologies, forward thinking leadership, evidence based changes and student driven changes. If pressed, changes in preclinical instruction were most likely due to outside influences. The way preclinical faculty interact with students and give feedback has been influenced by both student evaluations of their instructors and an emphasis by administration to enhance the quality of instruction. Making grading criteria more explicit-more detailed rubrics-students see copy of actual grading sheet with faculty comments –in past students received an overall grade. CAD/CAM, minimally invasive emphasis.
- PENN** Specific to Operative Dentistry: Yes
1. Incorporated Advanced Simulation in 2003 into the curriculum
  2. Consolidated the Operative Dentistry course – split the course in half and teach smaller groups
  3. Improved faculty student ratio
  4. Implemented clinical courses for D1 students parallel to the Operative Dentistry course to augment and validate what is learned in the course.
  5. Carious teeth – premade
  6. Investigating and developing other technological advances in simulation (haptics, haptography)
  7. Looked into Vitalbooks
- The interactive technology with virtual reality and instant feedback is embraced by the current students and it is consistently one of the highest ranked courses in the first year curriculum. Changes in the philosophy/curriculum. Technology allowed us to reduce redundancy in the curriculum and replace it with more meaningful experiences in the clinic. Changes in philosophy/curriculum at the SDM Technology advances have made these changes possible.
- SUNY** Yes. High tech manikin simulation lab replaced traditional pole-mount work bench environment. The bottom line for us is that we had an older teaching facility that needed to be upgraded and we turned to what was becoming the standard for a dental school. In upgrading to a simulation lab, we simultaneously satisfied characteristics of the millennium generation.
- TEMP** No response submitted

**TUFT** While we have traditional work benches we also have a new state of the art simulation room that allows each student to be in their own computerized operatory treating a simulated patient case that will adjunct the weekly restorative exercises students will be working on.

**UMD** The use of more sophisticated manikins has changed the preclinical exercises from a project focus to a focus more on procedures. Much of this has to do with the delivery of care centered on the dental unit. In the past, students used a rod to hold the typodont. While this allowed a greater access to the preparation, students and limited use of the dental equipment found in the dental operatory. The change in the preclinical environment has presented a number of challenges for the faculty, One problem has been that with the move to a new environment a number of faculty have retired or left the school. This has increased the student to faculty ratio. Along with the increase in the number of students to cover, the simulation area is located in two large areas. This differs from smaller labs previously used.

**UMNJ** No response submitted

**UMON** No response submitted

**USN** No response submitted

**UTOR** No response submitted

### C. Clinical Experiences

1. Has the way your department conducts clinical teaching of restorative dentistry changed significantly in the last 10-12 years? (e.g. discipline clinics replaces by general dentistry clinics, traditional clinical requirements abandoned for “activity points”)
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990’s.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school’s leaders or curriculum).

**BU** All of the pre-doc program is now called general dentistry, but clinical instruction is still done departmentally. Clinical work is all compiled into the GD630 concept where total points determine a grade. Every clinical activity is now electronically recorded through the school. Obviously, the availability of an in house computer system made this possible. We could use more faculty and are increasing our numbers this year. The curriculum is beginning to change as a new strategic concept is being implemented.

**CLMB** Most basic curricular changes have evolved around a general practice model that has been in place since the early 1990’s. Patient care is in the forefront with education close behind. Simple and Complex Case completions, comprehensive skill assessment examinations and patient encounters have long replaced a “point” system on the road to graduation. A small group system with faculty group leaders controls the patient assignment and monitors the progress of each student and each case being treated. All of the changes made in the clinical curriculum over the years had very little or nothing to do with student characteristics. We would like to think that instituting best practices in patient care was uplifting and therefore improved those unsavory characteristics of the “millennial” student.

**CONN** No response submitted

<b>DAL</b>	No response submitted
<b>HARV</b>	No response submitted
<b>HOW</b>	<p>Surfaces required have been replaced by competencies and documentation of skills. All patients must have a caries risk assessment completed; patient's initial treatment plans consist of perio, endo, oral surgery and direct fillings. Fixed and removable prosthodontics are addressed upon completion of the other disciplines. This is to prevent students from choosing what they prefer to do for the patient. We are making changes that will satisfy this generations reliance on the internet and desire to control their time and place of receiving information. Some faculty want to use on line curricula. CEREC, Axium, and Sim lab training were introduced due to the available technology and recognition that the college needed to improve resources. Limited support faculty and staff were motivating factors as was the desire to reduce outside lab expenditures. We are currently undergoing a change in philosophy with a new group of faculty leaders. New philosophies will be introduced this semester.</p>
<b>LAV</b>	No response submitted
<b>MCG</b>	No response submitted
<b>NYU</b>	<p>Yes. Group practice model has been in place since 2000. Both third and fourth year dental students are instructed in comprehensive care clinics with general dentistry faculty as well as specialty faculty from perio, pros, endo. Relevance: students are being exposed to clinical dentistry earlier-are assigned to a group practice from day 1, are required to do clinical observations, pedo rotations, place sealants, fluoride varnish, and OHI to area schools and day care centers. Also students will start treating patients in the middle of their second year instead of at the beginning of the third year. Grading of students is multi-factorial – points, MDS and competencies. Two faculty must check the removal of decay. Students are to restore all surgically treated lesions with composite. Amalgam is used only absolutely necessary and must be justified. Daily care plans for D3 students- must discuss the rationale for each treatment session, materials used, prognosis before treating patient. Earlier entry into clinic- multi factorial rationale- both due to students seeking more relevance and outside influences and social philosophy. Two examiners for caries removal (NERB scores improved). Changing the triage for amalgam usage. Implementation of daily care plans. Clinical grading. Group practice model.</p>
<b>PENN</b>	<p>Group system is the same as it has been where most general dentistry is completed; specialty clinics are used for specific disciplines. We still have a point system.</p> <p>Changes:</p> <ol style="list-style-type: none"> <li>1. Increased adhesive procedures</li> <li>2. Embraced CAD/CAM procedures</li> <li>3. Implemented an Honors clinic for D4 students</li> <li>4. Implemented Caries Risk protocol</li> <li>5. Implemented digital radiography</li> <li>6. Implemented electronic chart system</li> <li>7. Small group discussions</li> </ol> <p>Changes are made based on advances in “best practices” backed by literature, not based on student characteristics, although student feedback is valued. As stated above, changes were made based on advances in “best practices” backed by literature and representative of the changes in philosophy and curriculum at the SDM.</p>

<b>SUNY</b>	Attendance is paramount, minimum points must be achieved but expectations of competency are mandatory. Learning in groups: Patient 1, Patient 2, Patient 3, Clinic 1, Year II primary care clinic, Clinic III the General Practice program in year 4. Small group learning debriefing at beginning and end of clinic.
<b>TEMP</b>	No response submitted
<b>TUFT</b>	The school has had a general dentistry group concept for many years and recently has expanded to include four new groups to give total of twelve group practices. Currently, since the groups are a bit smaller, the students have more individualized attention. Students collect procedural experience in addition to traditional clinical requirements.
<b>UMD</b>	Competencies have replaced clinical requirements. This however has not eliminated the importance in providing a minimum number of clinical experiences. A number of factors, however, had influenced the students' abilities to attain these experiences.
<b>UMNJ</b>	No response submitted
<b>UMON</b>	No response submitted
<b>USN</b>	No response submitted
<b>UTOR</b>	No response submitted

## II. DIGITAL DENTISTRY

- A. Has your school incorporated digital dentistry as impression taking, model formation, CAD-CAM, etc.?
- B. Which technologies are you using? Please name the brands.
- C. What have been your experiences with these technologies?
- D. To what degree are they used in the teaching program?
- E. Has this technology had a positive or negative impact on clinic income?
- F. Are all interested faculty trained or is there a specific "digital guru"?
- G. Has it replaced conventional techniques or does it augment conventional techniques?
- H. What is the response from the students?
- J. Are intraoral digital impressions taken or conventional impressions which are scanned afterwards?
- K. Do the students realistically have enough time to totally complete a restoration from preparation to cementation in a single appointment (morning or afternoon session)?
- L. Please indicate the time length of a morning or afternoon clinic session.

**BU** While CEREC use is becoming common, our impressions continue to be made with elastomeric materials. Along with CEREC, we are about to begin using Kavo Lava COS. Many, but not all students have used CEREC. When COS is in place, they all will start to use it. They are fully taught, but not utilized enough. Possibly due to faculty reticence. Not enough use to be accurately measure impact. Most of the faculty have been trained. There are only four who will design and mill the restorations. Augmentation is as far as we have gotten. The closer it gets to graduation the more the D4s realize that they can save 2 weeks of lab time by doing CEREC. Still doing conventional impressions and then scanning them. Since all impressions are poured, there is no way that a restoration can be done in one session. Our sessions are three hours each.

**CLMB** Yes. CAD/CAM, digital impressions, digital radiography and the Electronic Health Record. CEREC (Sirona), Itero, Strauman. CEREC restorations are placed daily. Digital impression and transmission are presently at a standstill. (Legal snafu with transmission of images off site) CEREC restorations are provided daily and most students get to prepare, design, mill and cement several crowns. The digital impression techniques are taught and practiced but for information only. We still are unable to transmit images to labs off site. The return thus far is minimal. Any expense is absorbed for the value educationally. Only a handful of faculty have expertise and they are the force that drive the programs and supervise patient care. If the technology were to be fully implemented, additional faculty would be trained and involved. Technology augments conventional techniques. Student response is very positive. Students like anything that reduces the work and increases their potential for revenue generation. Both conventional and digital techniques are taught/demonstrated/experienced but not used in patient care. In a three hour session, yes, the restoration can be completed. AM Session: 9:00 - 12:00 Noon; PM session 1:00 - 3:00, 3:00 - 5:00, and 5:00 - 7:00.

**CONN** No response submitted

**DAL** No response submitted

**HARV** No response submitted

**HOW** Yes, we have incorporated digital dentistry for impression taking and model formation. We are using CEREC III with CEREC IV software. There has been a difficult learning curve. One faculty member has done or supervised over 70 restorations. The technology has had a positive effect on clinic income. All interested faculty received the same training but one faculty member has become the digital “guru”. CEREC technology augments conventional techniques. Students seek out the “guru” enthusiastically. They enjoy digital dentistry; they see it as a practice builder and see themselves accomplishing indirect restorations quicker. Both intraoral digital impression and conventional impressions are used. It depends on who is the operator and what type of clinical situation is encountered. Single appointments are not used. Students are not proficient enough to produce and cement a restoration in one appointment. Our clinic sessions are three hours each.

**LAV** No response submitted

**MCG** No response submitted

- NYU** Yes, CAD/CAM technology. CEREC 3D by Sirona. Great experience if the preparation is done properly. In simulation laboratory (D2 esthetics) and in group practices (junior and senior students). Though the use of CAD/CAM technology has the promise of lowering laboratory costs, even with donated CAD/CAM equipment, the cost of installation, maintenance and training makes this at best a break even proposition. It is probably a necessary negative on the balance sheets. Our students must be trained in this technology. A good number of faculty are trained. More and more would like to be trained. Almost all inlays and onlays are done with CAD/CAM technology. Crowns are done in the conventional way. Student response has been very positive. All students get the opportunity to use the software which they have in their computer in the simulation laboratory and those students with patients that are treatment planned for CAD/CAM have the opportunity to work with faculty to provide the service. Intraoral impressions most of the time. Sometimes for a second molar, a conventional impression is taken and a digital impression is taken from the cast. Morning session: 8:30 - 10:45, 10:45 - 12:45. Afternoon session: 2:00 - 4:00, 4:00 - 6:00, 6:00 - 8:00.
- PENN** Yes. CAD/CAM lab on site. Digital Impression system. Noritake, Nobel, Strauman, Zirconzan, #M, Lava, Sirona to name a few (list incomplete). Successful, slowly gaining momentum in the clinic. They are available to D3 and D4 students. Technology is too new to judge impact. We have designated faculty responsible for these particular technologies. They hold information sessions and training sessions for faculty and students. Technology augments conventional techniques. Student response has been positively received. The majority of impressions are still conventional; when digital impression system is used in the clinic it is intraoral. The student does not do a complete restoration. The CAD/CAM lab makes the restoration, or it is made off site and cemented later. Time length: D\$ only session 8:00 - 10:00; general morning session 8:00 - 12:00, afternoon session 1:00 - 5:00.
- SUNY** CEREC 3 is used in year II, III, GPP, and GPR clinic. Nobel Procera is used to scan dies/master casts. Restorations are designed digitally. Digital files sent to a milling center (Nobel Biocare) and milled in Ti,ZrAlO or CoCr. CEREC by Sirona and Nobel Procera Nobel Procera is fully employed. Used in our year 2, 3, 4 and GPR programs. Impact has not been determined due to the relatively small numbers of procedures completed. The use of CoCr for PFM copings should provide an excellent restoration that will eventually save the patients and school money. We have 8 faculty trained with CEREC but need more as it is labor intensive. All of our prosthodontists as well as several general dentists are trained in the use of Nobel Procera technology. Technology augments conventional techniques. Student response has been very positive. They are very enthusiastic about it. CEREC inlays and onlays utilize digital impressions. If Nobel Procera conventional impressions are used, the die is digitally scanned. E-Max crowns will be used in the future and conventional impressions will be used, then die will be digitally scanned. Students do not complete a restoration without faculty assistance. Yes, it can take two hours to prepare, design,, mill and cement one case. Patients can piggy back appointments if necessary for a four hour block. AM Clinic - 3 hours; PM clinic - 4 hours.
- TEMP** No response submitted

- TUFT** The school teaches via lecture about digital dentistry but it is not regularly used in the undergraduate clinics. It is a requirement for students to complete one CAD crown prior to graduation. E4D is used. In addition some digital dentistry is used in the general dentistry program. Digital impressions are not used and conventional impressions are not scanned.
- UMD** Digital dentistry has been included in the curriculum. The school has available the iTero and Lava systems for digital impressions and the CEREC AC for both impressions and CAD/CAM. We have been slow to adopt these technologies. All students have a lecture and a pre-clinical simulation experience with all systems. Their use in the clinic is encouraged but not required. The effect on clinic income has been too small to comment on. All faculty have been encouraged to participate in training. This however, has been a major roadblock in our progress. The use of these technologies has been presented as an alternative to conventional techniques. Student response has been positive. Digital impressions are made intraorally. Single visit appointments are unrealistic. For the times that these have been completed, the faculty supervision has been one on one with the faculty completing much of the procedure. Our appointment sessions are three hours each.
- UMNJ** No response submitted
- UMON** No response submitted
- USN** No response submitted
- UTOR** No response submitted

### **III. RESTORATIVE DENTISTRY**

A. Are operative procedures in the clinics done the same way as taught in pre-clinics?

- BU** Yes
- CLMB** Yes, with rare case mitigated exceptions.
- CONN** No response submitted
- DAL** No response submitted
- HARV** No response submitted
- HOW** Operative procedures in the clinics are done the same way as taught in the pre-clinic.
- LAV** No response submitted
- MCG** No response submitted
- NYU** Yes
- PENN** Ideally, that is the intention.
- SUNY** Yes.
- TEMP** No response submitted
- TUFT** Every effort is made to teach operative procedure the same in both clinic and pre-clinic. Obviously, individual patient needs will bring forth some procedures that are taught only in the clinic.
- UMD** For procedures covered by the Operative Faculty, the techniques are the same in the clinic and pre-clinics.
- UMNJ** No response submitted
- UMON** No response submitted
- USN** No response submitted
- UTOR** No response submitted



B. Are the same materials, instruments and burs used?

- BU** The materials are the same. Pre-clinic has more hand instruments. The burs are the same but the #329; the bur of choice in pre-clinic is rarely used in clinic.
- CLMB** Yes.
- CONN** No response submitted
- DAL** No response submitted
- HARV** No response submitted
- HOW** There is a greater choice in materials in clinic and a greater choice of instruments in the lab.
- LAV** No response submitted
- MCG** No response submitted
- NYU** Yes
- PENN** Yes
- SUNY** Yes
- TEMP** No response submitted
- TUFT** The pre-clinic and clinic try to use the same materials and procedures.
- UMD** The clinics, however, are covered by a number of volunteer faculty which often deviate from the school's teaching concepts.
- UMNJ** No response submitted
- UMON** No response submitted
- USN** No response submitted
- UTOR** No response submitted

C. If there are differences, how are they reconciled?

- BU** Clinical faculty and the student discuss the situation and an agreed upon sequence is carried out.
- CLMB** Not applicable.
- CONN** No response submitted
- DAL** No response submitted
- HARV** No response submitted
- HOW** We let students know that there are alternative instruments in the clinic cassette that work just as well. We tell them that Dentoform teeth cut more easily than enamel, and dentin. For that reason they will not find a hatchet in the clinic cassette. No spoon in the lab, no esthetic trimming knife in clinic cassette, no interproximal carver in clinic, no articulating paper holder in lab. Students have their own bur blocks in their instrument issue.
- LAV** No response submitted
- MCG** No response submitted
- NYU** Not applicable
- PENN** A material committee meets, discusses the science or validity for change and sanctions the change.
- SUNY** Based on clinical situation and faculty
- TEMP** No response submitted
- TUFT** No response submitted
- UMD** No applicable.
- UMNJ** No response submitted
- UMON** No response submitted
- USN** No response submitted
- UTOR** No response submitted

D. What methods/systems are taught for polishing composites?

<b>BU</b>	Bard Parker #12 and finishing burs/carbides remove gross excess followed by Soflex discs to finish and polish
<b>CLMB</b>	Brasseler composite system, Soflex discs, Shofu points
<b>CONN</b>	No response submitted
<b>DAL</b>	No response submitted
<b>HARV</b>	No response submitted
<b>HOW</b>	Anterior: fine diamonds for shaping, carbide polishers, Enhance finishers, Pogo polishers or EP discs for shaping and polishing. Posteriors: fine diamonds for shaping, carbide polishers, Enhance finishers, Pogo polishers.
<b>LAV</b>	No response submitted
<b>MCG</b>	No response submitted
<b>NYU</b>	No response submitted
<b>PENN</b>	Brasseler diamond and carbide polishing system. Shofu points, discs and ups, Soflex discs.
<b>SUNY</b>	We use fluted carbides, Soflex and rubber points
<b>TEMP</b>	No response submitted
<b>TUFT</b>	Fine or extra fine diamond finishing burs are used, composite finishing discs, white stone if needed and Shofu rubber cones, cups or discs for polishing. Final polish using wet buffing wheel
<b>UMD</b>	Not applicable
<b>UMNJ</b>	No response submitted
<b>UMON</b>	No response submitted
<b>USN</b>	No response submitted
<b>UTOR</b>	No response submitted

E. Are any bulk fill composite techniques taught? If yes, please describe.

<b>BU</b>	No
<b>CLMB</b>	No
<b>CONN</b>	No response submitted
<b>DAL</b>	No response submitted
<b>HARV</b>	No response submitted
<b>HOW</b>	Surefil bulk composite technique Is taught. If a smoother surface is desired, the enamel layer may be condensed in Esthet-X. Surefil is not used in the lab.
<b>LAV</b>	No response submitted
<b>MCG</b>	No response submitted
<b>NYU</b>	No
<b>PENN</b>	For core build up only, composite or compomer
<b>SUNY</b>	No, we teach incremental application of hybrid 3M supreme composite. On occasion we will demonstrate flowable composite application
<b>TEMP</b>	No response submitted
<b>TUFT</b>	Bulk fill composite techniques are not taught
<b>UMD</b>	Bulk fill composite is not currently being used in the clinic
<b>UMNJ</b>	No response submitted
<b>UMON</b>	No response submitted
<b>USN</b>	No response submitted
<b>UTOR</b>	No response submitted

- F. Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? What about new techniques – how long to implement into pre-clinic labs and clinics?
- BU** Once a material is approved, it is in the lab/clinic as soon as it can be delivered.
- CLMB** Recommendation of materials by faculty, approval by Division Chair, Purchase order, implementation. The process can take anywhere from two to six weeks. Technique changes can take up to a semester via the same system.
- CONN** No response submitted
- DAL** No response submitted
- HARV** No response submitted
- HOW** Some materials are never introduced in the lab. There may not be enough time in the curriculum to do so and some of the materials are too expensive to be used in the lab. It takes persistence and attention to introduce new materials into the curriculum. It also requires a sufficient budget. New techniques are usually introduced by a dynamic and motivated faculty member. It is best to lobby for new materials right before the Department Director puts out the materials list at the beginning of the fiscal year.
- LAV** No response submitted
- MCG** No response submitted
- NYU** Generally when possible new materials or techniques are introduced into the simulation laboratory. This provides a form of beta testing. This then allows for a natural progression into the clinic. When this is not possible or practical it depends if we are dealing with a product or a technique. Products are an easy switch with an e-mail to the clinical students, the group practice directors and faculty. If a product requires special applications and service training is provided and students utilize the material for the first time under direct faculty supervision. Techniques are more difficult and it's rare that any changes are made without first evaluating them in the preclinical programs. Implementation in the pre-clinic generally occurs at the beginning of the course. At the end of each academic year or program the course director or chairperson evaluates the technique. Recommendations are made regarding the changes at which time new techniques or materials are adopted.
- PENN** New materials need to go to bid by suppliers, within 6 months to a year; new techniques are discussed in Executive council meetings for the department and if agreed upon would be implemented most times the following academic year.
- SUNY** A year. Decisions are based on finances
- TEMP** No response submitted
- TUFT** If a material is approved for pre-clinical or clinical use, the implementation is quick - as long as it takes for the material to arrive.
- UMD** Change in technique and material is a slow process. There have been no changes in my six years here
- UMNJ** No response submitted
- UMON** No response submitted
- USN** No response submitted
- UTOR** No response submitted

#### IV. SCHOLASTIC

##### A. What is considered scholarly activity at your institution?

- BU** Every student has the opportunity to do research in Public Health or Biomaterials. They present their results at our annual science day. Faculty publish in peer reviewed journals and books, conduct continuing education courses, make presentations at meetings and become Board Certified.
- CLMB** Course development, teaching (lectures, clinical/preclinical supervision), Research grants and publications (educational and basic), Presentations at local and national meetings.
- CONN** No response submitted
- DAL** No response submitted
- HARV** No response submitted
- HOW** Research, publication in a peer reviewed journal, presentation at meetings, book chapters.
- LAV** No response submitted
- MCG** No response submitted
- NYU** This varies depending if a person is on tenure track or clinical track.
- PENN** Active research, published manuscripts
- SUNY** In the past our school generally considered scholarly activity equivalent to publish or perish. More recently it has been expanded beyond traditional requirements to include presentations at national and international meetings, successful achievements of board certification in specialties, book chapters, innovation's in clinical technologies, giving CE courses at a national and international level, publications in peer reviewed journals and research grants from government agencies or corporations.
- TEMP** No response submitted
- TUFT** Participation or leadership in professional activities such as membership on professional/editorial boards and receipt of scholarly awards.
- UMD** Grants, papers and presentations are the most common forms of scholarly activity.
- UMNJ** No response submitted
- UMON** No response submitted
- USN** No response submitted
- UTOR** No response submitted

##### B. What are the expected standards for Assistant, Associate, and Full Professors?

- BU** With rare exceptions we are all on the clinical track: Assistant Clinical Professor- possess a doctoral level degree and demonstrate the potential for excelling in the areas of teaching or service. Associate Clinical Professor- demonstrate excellence in either areas of teaching or service and have a half time to full time appointment. Clinical Professor- previously held the rank of Associate Clinical Professor, have a half time to full time appointment, demonstrate both a substantial contribution to the school and excellence in the areas of teaching or service.

<b>CLMB</b>	Slightly different between Tenure track and Clinical track. Fully explained in the Appointments and Promotions section of the Faculty Manual. Basically it is scholarly activity as outlined above with emphasis on greater quantity and quality as one moves up in rank.
<b>CONN</b>	No response submitted
<b>DAL</b>	No response submitted
<b>HARV</b>	No response submitted
<b>HOW</b>	These are currently under review.
<b>LAV</b>	No response submitted
<b>MCG</b>	No response submitted
<b>NYU</b>	Refer to the NYU Faculty Manual
<b>PENN</b>	Depends on the faculty track appointed to. Discussed in our meeting refer to U. Penn Faculty Handbook.
<b>SUNY</b>	<b>Assistant Professor:</b> Recognized in your discipline at a national level which includes invited lectures at national meetings, responsible for CE courses, publishing in clinical r basic research journals, passing board examinations, book chapter publications, etc. <b>Associate Professor:</b> Recognition at international levels, invitations to lecture at international meetings, publishing in recognized international journals, more publications than for assistant professor. <b>Professor:</b> In addition to the above, significantly more research and publications.
<b>TEMP</b>	No response submitted
<b>TUFT</b>	<b>Assistant Professor:</b> show promise as teachers and researchers with an indication of commitment to an academic career and, where appropriate, have specialty training. <b>Associate Professor:</b> have a record of superior accomplishment in teaching and research. <b>Professor:</b> demonstrated the ability to conduct and supervise high quality teaching and research and who hold respect of their peers for contributions to their fields.
<b>UMD</b>	No response submitted
<b>UMNJ</b>	No response submitted
<b>UMON</b>	No response submitted
<b>USN</b>	No response submitted
<b>UTOR</b>	No response submitted

C. If your institution has clinical tracks, what are the expected standard levels for each level?

<b>BU</b>	See response to previous question
<b>CLMB</b>	See response to previous question
<b>CONN</b>	No response submitted
<b>DAL</b>	No response submitted
<b>HARV</b>	No response submitted
<b>HOW</b>	The clinic track is currently under review.
<b>LAV</b>	No response submitted
<b>MCG</b>	No response submitted
<b>NYU</b>	Refer to the NYU Faculty Manual
<b>PENN</b>	Discussed in our meeting refer to U. Penn Faculty Handbook.

<b>SUNY</b>	The standards for faculty on clinical tracks are less compared to tenure tracked faculty. Less publication requirements and some lectures/presentations at national meetings.
<b>TEMP</b>	No response submitted
<b>TUFT</b>	We don't have a clinical track but have a "contract track" which was developed for full time clinical faculty. Assistant: individual demonstrated skills and dedication required to teach, Associate: recognized record of superior accomplishment in teaching and superior clinical skills, Professor: conducts and supervises high quality teaching, holds the respect of the students, faculty and peers for contributions to their field, exceptional clinical skills.
<b>UMD</b>	No response submitted
<b>UMNJ</b>	No response submitted
<b>UMON</b>	No response submitted
<b>USN</b>	No response submitted
<b>UTOR</b>	No response submitted

## V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN

- A. What, if any, are the implications of the following article? Summarize and report the discussion.

*Dental Composite Restorations and Psychosocial Function in Children.* Maserejian Nancy N., Trachtenberg Felicia L., Hauser Russ, McKinlay Sonja, Shrader Peter, Tavares Mary, and Bellinger David C. Pediatrics originally published online July 16, 2012. DOI: 10.1542/peds.2011-3374.  
<http://pediatrics.aappublications.org/content/early/2012/07/11/peds.2011-3374.full.pdf+html>

- B. In the last five years, has your College/School made policy changes that impact/restrict the utilization of amalgam? If yes, what are the changes and the rationale for such changes?

<b>BU</b>	No
<b>CLMB</b>	No
<b>CONN</b>	No response submitted
<b>DAL</b>	No response submitted
<b>HARV</b>	No response submitted
<b>HOW</b>	The college has made no policy changes that impact or restrict the utilization of amalgam.
<b>LAV</b>	No response submitted
<b>MCG</b>	No response submitted
<b>NYU</b>	Yes: In recognition of the environmental impact of mercury in amalgam, the new paradigms of minimally invasive dentistry, and the well-established performance record of new dental materials, the college has decided that we will no longer recommend dental amalgam as the primary posterior tooth restorative. We will no longer require students to perform competency examinations that mandate amalgam restorations. Students need to obtain faculty permission specifically to convert a preparation to an amalgam reparation. Please note: this policy does not recommend the removal of sound amalgams and it does not imply that amalgam is unsafe for patient care.
<b>PENN</b>	No

**SUNY** No, the decision for amalgam vs. resin is based on esthetics, the size of the cavity reparation, caries risk and the ability to isolate the field.  
**TEMP** No response submitted  
**TUFT** We have not restricted the utilization of amalgam. Faculty and students work on a case by case basis on decision of materials used.  
**UMD** No response submitted  
**UMNJ** No response submitted  
**UMON** No response submitted  
**USN** No response submitted  
**UTOR** No response submitted

**VI. REGIONAL CODE AGENDA**

*To be established by the respective Region and Regional Director. Please also report on responses to the Regional Agenda by all participants.*

**No Regional Agenda Submitted**

# **Consortium of Operative Dentistry Educators**

**(CODE)**



## **REGION VI (SOUTH) ANNUAL REPORT**

Region VI Director:  
Dr. R. Gary Holmes  
Georgia Regents University  
August, GA

Region VI Annual Meeting Host:

Dr. R. Gary Holmes  
Georgia Regents University  
August, GA

Region VI Annual Report Editor:

Dr. R. Gary Holmes

CHAPTER 6



## CODE REGIONAL MEETING REPORT FORM

**REGION** VI South East

### LOCATION AND DATE OF MEETING:

University: Georgia Regents University

Address: Augusta, GA

Date: October 3 -5, 2012

### CHAIRPERSON:

Name: Dr. R. Gary Holmes

Phone #: 706-721-2881

University: Georgia Regents University

Fax #: 706-721-8349

Address: Augusta, GA

E-mail: rholmes@gru.edu

**List of Attendees:** Please complete the CODE Regional Attendees Form (following page)

### Suggested Agenda Items for Next Year:

No suggestions submitted

### LOCATION AND DATE OF NEXT REGIONAL MEETING:

Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

University: \_\_\_\_\_ Fax #: \_\_\_\_\_

Address: \_\_\_\_\_ E-mail: \_\_\_\_\_

Date: **TBD**

Please return all completed enclosures to  
Dr. Larry D. Haisch, National Director, UNMC College of Dentistry;  
40<sup>th</sup> and Holdrege Streets; Lincoln, NE 68583-0740.

**Deadline for return: 30 Days post-meeting**

Office: 402 472-1290 Fax: 402 472-5290 E-mail: lhaisch@unmc.edu

Also send the information on a disk and via e-mail with all attachments.

Please indicate the software program and version utilized for your reports.

**CODE Region \_\_\_\_\_ VI \_\_\_\_\_ Attendees Form**

<b>NAME</b>	<b>UNIVERSITY</b>	<b>PHONE #</b>	<b>FAX #</b>	<b>E-MAIL ADDRESS</b>
Gary Crim	Louisville	502-852-1303	502-852-3364	gacrim01@louisvill.edu
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Kevin Frazier	GRU	706-721-2881	706-721-8349	kfrazier@ gru.edu
Mary Baechle	VCU	804-828-7927	804-828-3159	mbaechle@vcu.edu
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Mullen Coover	South Carolina	843-792-3765	843-792-2847	coover@musc.edu
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Martha Brackett	GRU	706-721-2881	706-721-8349	mbrackett@ gru.edu
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Deborah Dilbone	Florida	352-273-5850	352-846-1643	ddilbone@edntal.ufl.edu
Larry Haisch	UNMC	402-472-1290	402-472-5290	lhaisch@unmc.edu
Marcelle Nascimento	Florida	352-273-5850	352-846-1643	mnascimento@dental.ufl.edu
Mike Sadler	Kentucky	859-323-8119	859-257-1847	msadl2@uky.edu
Henry Young	Meharry	615-327-6082	615-327-6246	hyoung@mmc.edu

**2012 NATIONAL CODE AGENDA  
REGION VI  
SUMMARY RESPONSES TO NATIONAL AGENDA**

**(Editor Note: Questions condensed for printing purposes)**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**NO REGIONAL SUMMARY RESPONSES SUBMITTED**

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

**I. MILLENNIAL IMPACT**

**II. DIGITAL DENTISTRY**

**III.RESTORATIVE DENTISTRY**

**IV.SCHOLASTIC**

**V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

**VI.REGIONAL CODE AGENDA**

**2012 NATIONAL CODE AGENDA**  
**REGION VI RESPONSES**  
*(Evidence cited where applicable)*  
*October 3 - 5, 2012*

**Region VI School Abbreviations**

<b>UAB</b>	<b>University of Alabama</b>	<b>MMC</b>	<b>Meharry Medical College</b>
<b>UFL</b>	<b>University of Florida</b>	<b>UNC</b>	<b>University of North Carolina</b>
<b>ECU</b>	<b>Eastern Carolina University</b>	<b>NOVA</b>	<b>Nova Southeastern University</b>
<b>GRU</b>	<b>Georgia Regents University</b>	<b>UPR</b>	<b>University of Puerto Rico</b>
<b>UKY</b>	<b>University of Kentucky</b>	<b>MUSC</b>	<b>Medical University of South Carolina</b>
<b>ULSD</b>	<b>University of Louisville</b>	<b>VCU</b>	<b>Virginia Commonwealth University</b>

**2012 NATIONAL CODE AGENDA**

*(Please cite the evidence were applicable. If utilizing reports/forms/schedules from your Regional schools, please submit these as **PDF files** for utilization in the Annual Fall Regional Report)*

**GENERATION Y/MILLENNIAL DENTAL STUDENTS**

**Background:**

During a recent ADEA (American Dental Education Association) board meeting in Washington, D.C., 40 millennial dental students discussed their perceived strengths and weaknesses and other trends to shed light on how schools can provide better dental education. Millennials are those students born between 1979 and 1994. The dental students said they use technology constantly to access information, conduct business and stay in touch, and that the Internet, text messaging, digital music, and downloads were all vital to their lives. The students expressed a preference for the ease of use of technology, but wanted to ensure that personal interaction remained a key part of their learning experiences. Many students indicated that their best academic experiences were those that involved a great deal of hands-on learning and allowed them to study in a group setting. The students also felt strongly that the best professors were those who care whether students were learning class materials, rather than just memorizing them, and those who made themselves available for help when necessary.

**Millennial Generation (Generation Y):**

1. **Definition:** a term used to refer to the generation, born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.
2. **Common Traits:**
  - **Tech-Savy:** Generation Y grew up with technology and rely on it to perform their jobs better. Armed with BlackBerrys, laptops, cellphones, and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through e-mail and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations.
  - **Family-Centric:** The fast-track has lost much of its appeal for Generation Y who is willing to trade high pay for fewer billable hours, flexible schedules and a better work/life balance. While older generation s may view this attitude as narcissistic or lacking commitment, discipline and drive, Generation Y have a different vision of workplace expectations and prioritize family over work.
  - **Achievement-Oriented:** Nurtured and pampered by parents who did not want to make the mistakes of the previous generation, Generation Y is confident, ambitious, and achievement-oriented. They have high expectations of their employers, seek out new

challenges and are not afraid to question authority. Generation Y wants meaningful work and a solid learning curve.

- **Team-oriented:** As children, Generation Y participated in team sports play groups, and other group activities. They value teamwork and seek the input and affirmation of others. Part of a no-person-left-behind generation, Generation Y is loyal, committed and wants to be included and involved.
- **Attention-Craving:** Generation Y craves attention in the forms of feedback and guidance. They appreciate being kept in the loop and seek frequent praise and reassurance. Generation Y may benefit greatly from mentors who can help guide and develop their young career.

## **I. MILLENNIAL IMPACT**

### **A. Classroom/Didactic Experiences**

1. Has the way your department teaches the didactic component of restorative dentistry theory or concepts changed significantly in the last 10-12 years? (E.g. traditional class lectures replaced with small group discussion session, or most of the didactic curriculum is delivered on-line).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990's.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school's leaders or curriculum).

**UAB** No response submitted

**UFL** The method in which the curriculum is delivered has not changes significantly in the last 10 years. Our didactic curriculum is primarily delivered via group lectures, reading from textbooks, and current publications. One change is that we have a requirement that each student purchase a laptop. The vast majority of the class bring their laptops to class and take notes. The changes that have occurred have been primarily due to changes within the profession.

**ECU** Our curriculum is new. It is fairly traditional with didactic lectures and simulation labs, but the students work in small groups twice during basic operative and once in advanced operative reviewing articles and making presentations on these articles. We use a discussion platform micro blog to allow the students in groups of 5-6, to ask questions and discuss points in the topic. This is used throughout the curriculum at ECU, not just in Operative.

- GRU** Yes. We recently moved into a preclinical lab facility that is also a good facility for classroom teaching, enabling us to conveniently use team-based learning for subjects involving decision-making that is appropriate for that method, e.g. bases and liners. We have long had course websites on which lecture content is posted as .pdf files which can be opened and marked up by the students during class. Videos of the classroom session are then posted on the website and can be viewed again by students. Also, as the lectures are given in the Simlab, lecture items that discuss new instruments or materials may be paused while students identify the new item, with faculty supervision to verify. None are due to generational differences. The ability to identify specific differences or weaknesses attributed to being in a different generation is difficult. For example- the skills learned by being able to read maps and easily find a small city among hundreds may relate to a student's ability to see the Class IV resin that somehow looks 'off' is due to a faulty line angle. GPS has taken that skill away from most GEN X students. All of the changes listed are in this category.
- UKY** No. Until recently teaching was status quo. Change is coming. We use Blackboard to communicate with students and post lectures. We tried the Audience Response System (clickers) for pre and post-tests and questions about lecture material during lecture, but that was a dismal failure due to faculty's reluctance to implement new technology (probably lack of training). Echo 360 with voice over is a big hit with students. Especially students whose first language is not English like being able to access the lectures over and over. Student focus groups have given input leading to changes such as the Echo 360. Most changes are probably due to limited faculty numbers and changes in philosophy of the school's leaders, but focus groups have had impact.
- ULSD** Minimal changes. For the pre-clinic course, Power points are placed on Blackboard before class so that students can follow along during lecture. A few operative faculty use Tegrity (lecture capture).
- MMC** Yes. All classroom/didactic components of restorative dentistry theory and concepts are made available on-line on Blackboard. The students now have the opportunity to pre-view and review all the theory and concepts presented in class by way of digital technology using their blackberries, laptops, cell phones or I-pads. Our 2nd year Dental Auxiliary Utilization course is divided into two groups vs. one group. This change is due to changes in the restorative curriculum, thus improving the student/faculty ratio.
- UNC** We are now using both lecture and small group. Most of the didactic information is available on-line and students download lecture content before the lecture is given. Course syllabi and all/content is available 24/7 via SAKAL. Use of "clickers" for immediate audience response to facilitate group learning/discussion. Certainly reduced full-time faculty; has driven the need to be more efficient and technology can help with improved efficiency.

**NOVA** We still present material in traditional lectures but post didactic materials (e.g. outlines, Power points, and videos) are posted on Blackboard (formerly on Web CT). In addition, we have implemented an interdisciplinary Integrated Restorative Dentistry Sciences course consisting of Dental Anatomy, Operative Dentistry, Cariology and Biomaterials expanded to include Occlusion and Fixed Prosthodontics. This interdepartmental vertically and horizontally integrated curriculum begins in the D-1 year and culminates in a team leader competency based clinic model. We are posting more information for the students on the web based programs. (Blackboard).

**UPR** No response submitted

**MUSC** No; except that all lecture material is now available on-line immediately after each lecture. The technology is available and the students demand it.

**VCU** Changes have included: -significantly less paper (no longer have a printed manual or lectures; all are posted online); -on-line exercises (i.e. Cariology “flash-cards”, quizzes, videos to watch and articles to read outside of class); - Echo 360 posting of lectures on Blackboard (captures lecturer presenting, Power point slides and audio); -small group discussion sessions; Traditional 50-minute lectures are still presented followed by a 3 hour lab; however, the above is incorporated/blended in. It seems students of today expect all information to be given to them in a concise way, available 24/7; they value their personal time very much and expect flexibility in their schedules as well as free time while in dental school, which is different from Generation X (late 1990’s graduates) or “Baby Boomers” dental school experience. Technology availability, limited faculty numbers and changes in the philosophy of the school’s leaders or curriculum. I think all affected these changes as well.

#### **B. Pre-Clinical Laboratory Experiences**

1. Has the way your department teaches the pre-clinical laboratory component of restorative dentistry theory or concept changed significantly in the last 10-12 years? (E.g. traditional work benches replaced with high tech manikin labs or significant use of patient simulators, like DentSim).
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990’s.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school’s leaders or curriculum).

**UAB** No response submitted

**UFL** Our courses were redesigned over the last 10 years and now there are a total of 3 Operative Dentistry courses. Operative I focuses on preventive care, Cariology, and the use of adhesive restorative materials based on the principles of minimally invasive dentistry. Operative II focuses on amalgam and indirect restorations. Operative III focuses on esthetics, which includes CEREC restorations, analysis of smile esthetics, and a case of multiple complex esthetic restorations (veneers, correcting minor rotation with composites, and treatment of an internally discolored tooth). Our physical facilities changed in February 1999 when we added our simulation laboratory. This replaced pre-clinic sessions that were conducted by placing a mannequin head in the headrest of a clinical chair. IN December 2009, audiovisual upgrades brought the equipment up to date. Our Dental Simulation Lab is now a fully-digital, high-definition system. Each student workstation includes a simulation unit with mannequin, a 22" flat screen monitor, and a student activated help light for instructor assistance. The instructor workstation includes a computer, 22" flat screen monitor, dual screen monitor with annotation capabilities, an intraoral camera, DVD player, VHS player, speakers throughout the Sim Lab and wet lab for student instructions, a digital document camera, a handcam connector, an instructor camera with a large counter area for demonstrations, and a sim unit with mannequin. The lab also houses a DentSim but it is never used. Faculty members that are trained on the DentSim found it to be too limited. Our intent was to use the DentSim to help struggling students but we were limited to the pre-set preparations, students were unable to move the mannequin head once everything was lined up, the handpiece was extremely heavy and the lasers measured handpiece movement whether it was cutting the tooth or not. It was also unable to detect refinement of the preparation with hand instruments. The most significant changes we have made to our pre-clinic teaching due to generational characteristics has been a move away from giving all instructions in the lecture room to conducting formative sessions in which students participate in step-by-step instruction and practice. The faculty member that initiated this change is in fact a millennial himself. After testing this method out, we found that it is quite successful and the students love it. An added benefit is that we do not need as many faculty members in the Simulation lab for this type of exercise. Instruction is given either live utilizing a video camera or via video and is displayed on each student's monitor. The first step is demonstrated and then all students complete that step at the same time. Once everyone is finished, the next step is demonstrated and the students follow, we continue with this process until the procedure is complete. We have found that students do much better during these formative sessions than they might do the next time when they do the entire procedure on their own. Once given the freedom to do it without instruction, the millennial student seems to take a little creative license in how the procedure is carried out, using different burs and not always following the guidelines given. We believe this may be influenced by them not always hearing what we have instructed and also due to their fear of failure. Oftentimes it appears as though the millennial student believes that if they do a procedure their way they will not fail as readily as if they do it our way. This semester we have also instituted daily grades for all pre-clinic exercises, which include an evaluation of the students' daily work, preparation, efficiency, knowledge, and determination. This appears to keep the students more focused, on task, and willing to improve things some would



not have addressed in the past. Students recently requested that we change the process in which we check their work or answer questions. In the past, students would turn on their student activated help lights when they needed assistance. This semester they had whiteboards placed throughout the Simulation Laboratory to ensure students are seen by faculty in the correct order. With the old method the faculty members were not always aware of which student turned their light on first and students wanted the ability to write down their station numbers in the proper order to make certain that no students were overlooked. Our technology upgrade in 2009 was more due to a desperate need for an upgrade than a change that was designed with our millennial students in mind. However, the change in technology is quite beneficial as we teach and interact with the students.

- ECU** Our curriculum is new. We have ADEC simulators with Frasco heads and Kilgore typodonts. The new simulation lab has a clinical video camera (Magna View), Elmo-type desktop projector, and AV to each student simulator. They use their laptops and iPads at their sim unit for review of the sequences.
- GRU** No, because we have had Frasco mannequins for more than a decade. We consider DentSim to be a huge expenditure for little capability, and are anxious for scanners with software purpose-written for assessment of preparations, restorations, wax-ups, etc. The use of ADEC simulators is extremely valuable. Have not seen enough evidence to compel expense of DentSim purchase.
- UKY** No. However, our pre-clinical lab is about to undergo major renovation. ADEC simulators will be installed. Granted, not the DentSim some other schools have, but a giant step forward here. Lab changes due to need to accommodate more students, and limited faculty. Charge from President and Provost of the University to increase class size was a motivating factor.
- ULSD** Yes. Simulation clinic was added in 2000. With the class size increase, rotation of the class thru the Simulation clinic became problematic. Fiber optics for handpieces and dental lights were added to the end labs (bench labs) so that the end labs were similarly equipped to the Simulation clinic.
- MMC** Yes. We utilize a high tech manikin laboratory along with Dent Sim patient simulators. For preclinical laboratory experiences, the Pre-clinical curriculum change includes the use of Dent Sim simulators as a diagnostic tool to evaluate 1st year student's motor skills prior to them taking Pre-Clinical Operative Dentistry. This spring the 1st year course, "Introduction to Operative Dentistry," will be enhanced by utilization of high tech manikins for cavity preparations/restorations. In previous years these procedures were performed on bench top in pre-clinical laboratory. Dividing the lab into two student groups was primarily due to limited number of simulators.
- UNC** We are still using patient simulators for correct polishing and dentofoms for development of early preparation and restoration skills. The system uses conventional means of depth/width measurement which are the same as what are used clinically. The challenge to calibrate faculty remains ever present.
- NOVA** We have added monitors at all work stations which can display information from the computer and document camera. In addition, the system has an overhead camera that can display for each student demonstrations that are performed by the faculty at the front of the laboratory.
- UPR** No response submitted

**MUSC** Traditional workbenches were replaced with ADEC simulator units about 7 years ago. In the past year, we have begun evaluation some student work by computer/CAD/CAM (E4D) including crown preps, wax-ups in dental anatomy and soon, Class I cavity preparations. In some ways yes, these guys HATE subjective evaluations, but this development in grading was as much pushed by faculty who also HATE subjective grading. Adec Simulators and computer (E4D) grading was technology driven but also driven by increasing class sizes and shrinking faulty numbers.

**VCU** Yes. Students appreciate and prefer technology.

- 1.) Technology availability: Traditional work benches were replaced with a high tech manikin lab, and significant use of patient simulators, like DentSim.
- 2.) Eliminating 2nd year pre-clinical operative and condensing into D-1 year, due to administrative/curriculum decision.

### C. Clinical Experiences

1. Has the way your department conducts clinical teaching of restorative dentistry changed significantly in the last 10-12 years? (E.g. discipline clinics replaces by general dentistry clinics, traditional clinical requirements abandoned for “activity points”)
2. If yes, list or describe the most significant or obvious changes that were most likely/primarily due to generational characteristics in our current student populations compared to those from the late 1990’s.
3. If yes, list or describe the most significant or obvious changes that most likely/primarily due to other causes and had little or nothing to do with current student characteristics (e.g. technology availability, limited faculty numbers, changes in the philosophy of the school’s leaders or curriculum).

**UAB** No response submitted

**UFL** In the Fall of 2008, the junior and senior year students were grouped into 10 Teams and placed in “general dentistry clinics”, which included restorative dentistry, prosthodontics and periodontics. The other disciplines maintained their clinics and rotations separately. The Team clinics are managed by a Team leader who is responsible for the clinic and patient management. The respective departments continue to set department requirements and evaluation standards. The primary evaluations include semester “skills assessments” for restorative procedures and RVUs. The goals are to: 1) better integrate the clinical curriculum and philosophy into the clinical care of the patients through effective patient management; 2) ensure and expedite the comprehensive treatment of patients and thus make clinics more patient friendly and; 3) assist and help motivate students through the clinical program. The weekly schedule was changed as well with clinics Monday through Thursday and classes for juniors and seniors on Friday. The College’s loss of State funding put more demand on clinical production and revenue from the student clinics. The objective was primarily to minimize the losses since the student dental clinics are by their nature are not particularly cost effective.

**ECU** Our curriculum is new. We only have D1 and D2 students currently. The D2’s will start seeing patients in November. There is a general dentistry model being developed at ECU. Relative Value Units will be assigned to clinical procedures and used to track quantitative production. Qualitative Skills Assessments will be used in the disciplines.

- GRU** Not our department, but by decree of the dean, the entire senior year since 2006 has been given over to a general dentistry department, where general dentists cover all clinical areas. As a result, nothing is done well. Would like to see faculty in Gen Dent Dept (4th year faculty) rotate through Oral Rehab specialties (Oper, Fixed, Removable, Diagnostics) to better understand the pre-clinical as well as Junior year clinical instruction provided. All of the changes listed above are in this category.
- UKY** Yes. We are instituting a “Generalist” model as of August 3rd start of fall semester. Competency based at present, requiring passing a criteria list. We are working toward change to Case Completion. Changes have been due mainly to limited faculty, philosophical changes of the school’s leaders.
- ULSD** Yes. In 2001, clinics changed from discipline-based to comprehensive care. More external rotations. Nurse practitioner added to emergency clinic. Students in School of Nursing will be more involved in emergency clinic/clinics. Competency exams and “recommended experiences” were added. Bigger push to graduate students “on time”.
- MMC** Yes. Our students utilize DentSim patient simulators for remediation and practice during clinical years. We no longer utilize traditional clinical requirements. We have incorporated a Clinical Experience Point System. We also administer a Final Clinical Competency Exam at the convenience of the patient’s availability and student as needed. This is due to the limited number of faculty and limited number of patients that meet the criteria for the exam.
- UNC** We are blended between discipline clinics (2nd/3rd year) and general dentistry/comprehensive care clinic (4th year). The clinical requirements represent minimum standards of performance. The models are more based on the desire for better preparation of our dental students for the practice of dentistry than they are on the learning style/preferences of any particular generation. The introduction of the 4th year general dentistry clinics (approximately 2006) was against all odds; we do not have enough faculty to support it well and to sustain it for the long term.
- NOVA** Yes. We have changed our clinical teaching to a group based Team Leader Model. With this change traditional requirements have also been replaced by a competency based curriculum. We have replaced discipline covered clinics with comprehensive patient care. The change to a competency based curriculum evolved from the generational characteristics as well as the need for teaching the importance of comprehensive care and not being procedure (numbers) driven.
- UPR** No response submitted
- MUSC** Yes; fixed pros and operative are combined since 2009. There are no “clinical requirements”, students have to complete so many contact hours in each discipline. It is about 850 in all of restorative. Worrisome at first, as it is possible to graduate with all Class I’s and V’s but that hasn’t happened. Not even close. Because students are assigned comprehensive care patients only and faculty control which patients are assigned to which students, axiUm allows us to see who is doing what and make adjustments where needed. I look at the axiUm report daily, at least in Operative. I assume the other disciplines do the same. None, this was primarily done to ease pressure on faculty and comprehensive care was introduced to be certain students learned how to manage it; and to stop patient swapping and the idea of treating the procedure rather than the patient. Number of faculty.

**VCU** Yes, although I'm not sure what was due to generational characteristics. I think the move back to General Practice Groups was a shift in philosophy of the school's leadership and was due to: a) getting away from fragmented patient care; b) students learning the concept of comprehensive treatment planning and patient care model as well as; c) accomplishing a and b in a private practice model.

## **II. DIGITAL DENTISTRY**

- A. Has your school incorporated digital dentistry as impression taking, model formation, CAD-CAM, etc.?
- B. Which technologies are you using? Please name the brands.
- C. What have been your experiences with these technologies?
- D. To what degree are they used in the teaching program?
- E. Has this technology had a positive or negative impact on clinic income?
- F. Are all interested faculty trained or is there a specific "digital guru"?
- G. Has it replaced conventional techniques or does it augment conventional techniques?
- H. What is the response from the students?
- J. Are intraoral digital impressions taken or conventional impressions which are scanned afterwards?
- K. Do the students realistically have enough time to totally complete a restoration from preparation to cementation in a single appointment (morning or afternoon session)?
- L. Please indicate the time length of a morning or afternoon clinic session.

**UAB** No response submitted

**UFL** We have been using the CEREC CAD/CAM system here for 8 years as a one-session containing preparation, digital impression, mill and delivery of restoration. We are in the process of placing computer acquisition units in our student clinics to take digital impressions and send remotely to CEREC Connect for processing indirect restorations. Also, one Itero unit has been available for limited use for about a year. Two preclinical lectures and SimLab experiences in our last Operative (III) preclinical course. We have used it in a somewhat limited way in our student clinics for 8 years. There is now a requirement in Operative that each of the junior and senior students must complete one CEREC restoration or chairside assist on two sessions. It has had a limited but positive impact on clinical income. There are currently four faculty members that are proficient in CEREC within the college. It augments conventional techniques. Students love the technology and warm up to the process very well. Scans are done directly on each patient. We have a 3 – 3 ½ hour clinic session and we routinely finish same day cases in that time frame but sometimes it is very tight. Our sessions are each 3 hours, but may be stretched to 3.5 if needed.

**ECU** Yes, E4D will be utilized to some extent pre-clinically and clinically. No experience just yet. Advanced Operative, Fixed Prosthodontics, possibly dental anatomy in the future. Don't know yet about impact. So far about three faculty have been trained. Slowly, all should receive training. Technology augments conventional techniques. Don't know student response yet. Both will be options. Don't know yet if students realistically have enough time. Our sessions are each 4 hours.

- GRU** Yes, E4D. We don't rely on intraoral scans, but otherwise, it's just another way of fabricating a ceramic restoration. No impact on clinical income. All faculty are interested. Technology augments conventional techniques. Positive response from the students, they appreciate having some background in the area. We scan casts. Students do not realistically have enough time. Our sessions are each 4 hours.
- UKY** Yes, exposure in pre-clinical courses RSD835, Aesthetic Dentistry, is the source of training. CEREC (Sirona). Little experience at the dental school but I had some experience in private practice. Not implemented in clinic (exposure only). Interested faculties are not trained. Two faculty members are responsible for the 3rd year course, Dr. Haubenreich and Dr. Kovarik. Neither one - not implemented in clinic. Students are very interested and would like to implement technique in clinic. Conventional impressions are taken and scanned afterward in lab (reflective stone or powder coated). Yes our students do realistically have enough time since we implemented this modality. Sessions : 9:00-12:00 pm and 2:00-5:00 pm. Now, there are some 8-12 and 1-5 clinic sessions.
- ULSD** Digital impressions. Lava chairside oral scanner COS (limited usage). Use limited to select cases in prosthodontics clinic. Operative does not use them. Unsure of impact. A limited number of prosthodontics faculty are trained. Technology augments conventional techniques. Don't know student response yet. We utilize intraoral impressions. Our sessions are each 3 hours.
- MMC** Yes. CEREC. Students complete two restoration in pre-clinical operative. Unable to evaluate the impact this technology has on clinic income at present time. All faculty in the Restorative Department are trained. It augments conventional techniques. The students are very excited to utilize this new technology. Both intraoral digital impressions and conventional impressions, which are scanned, are used. Yes, our students are able to complete a restoration from preparation to cementation in a single clinic session. Our sessions are each 4 hours.
- UNC** Not to any significant degree. Student receive didactic and preclinical experience with CEREC 3D and E4D for the purpose of exposure to ceramic inlays/onlays. Students have very little exposure to digital impression systems such as CadentiTero. These restorations are most predictable when indications are carefully adhered to. (*Boushell & Ritter, J EsthetRestor Dent 2009*). No impact on clinical income. Very few trained faculty members. Students primarily learn more conventional techniques. Either way, though completely digital provides less opportunity for dimensional changes reduce accuracy. Students do not realistically have enough time, however, with experience it becomes feasible. Our sessions are each 3 hours.
- NOVA** Yes. CAD/CAM, E4D; impressions are still taken then scanned with units. When treatment planned, student takes traditional impression and then works with technician and or faculty member to scan, design, mill and finish crown or onlay. At this point only about 1% of crowns/ onlays are using this technology so it would not be making a significant impact. All our faculty have the opportunity to obtain training during faculty development sessions. Technology augments conventional techniques. Students have shown a very positive response. Conventional impressions are scanned. Students do not realistically have enough time. Sessions: morning - 3 hours; afternoon - 4 hours.
- UPR** No response submitted

- MUSC** Yes, CAD/CAM ceramic restorations. Conventional fixed crown and bridge still done conventionally. E4D and CEREC (mostly E4D). They are well integrated in fixed pros curriculum, starting in the spring of the second year. It is entering operative (as a grading tool) this year. The freshmen will be taught how to use the scanning units in Dental Anatomy to evaluate waxing and Operative I students will use it for evaluating preparations beginning Fall 2013. I really have no idea, but since the equipment was mostly free to us and an E4D crown costs less to produce than a casting, I suppose there has been some modest profit. Free to us means reduced cost to school and donations covered most of the rest; all those machines have someone's or some company's name plastered on it. Several faculty are trained although there is still a "guru." More faculty are being trained this year. It augments traditional technique. The problem with allowing this to replace conventional techniques is that the equipment remains hugely expensive so new graduates cannot afford it without increasing the cost of dentistry to the patients. The students LOVE it and want more. Both techniques are used but mostly intraoral digital impressions. Seniors can do it after they've done a few. I recently witnessed a 4 surface onlay completed in two hours. Our sessions are each 3 hours.
- VCU** Not yet. Our sessions are each 3 hours.

### III. RESTORATIVE DENTISTRY

#### A. Are operative procedures in the clinics done the same way as taught in pre-clinics?

- UAB** No response submitted
- UFL** Yes, however faculty calibration is an issue since not all clinical faculty are actively teaching in pre-clinical courses.
- ECU** Don't know yet. They should be.
- GRU** Yes in junior clinics run by the restorative department, although some variance is introduced by volunteer faculty. No in senior clinics run by the General Dentistry Department. Junior clinic matches well with preclinical philosophy; Comp care (Senior Year) not as well calibrated. Things such as caries detection, proper use of explorer, not always uniformly taught.
- UKY** Yes, Mostly. As we all know when there are part-time faculty unfamiliar with pre-clinical teaching, there will be the introduction of "new" ways of doing things.
- ULSD** Yes, as much as possible. Most new faculty are run through the pre-clinic operative course.
- MMC** Yes.
- UNC** The students are pre-clinically taught and seek to master at least one technique for each type of restorative procedure.
- NOVA** We strive to be standardized with pre-clinic and clinic.
- UPR** No response submitted
- MUSC** Pretty much.
- VCU** Yes, that is our goal.

#### B. Are the same materials, instruments and burs used?

- UAB** No response submitted
- UFL** Yes.

**ECU** Yes.  
**GRU** Yes.  
**UKY** Yes.  
**ULSD** Yes.  
**MMC** Yes.  
**UNC** The same instruments, materials and restorative systems are used for pre-clinical and clinical procedures.  
**NOVA** Yes.  
**UPR** No response submitted  
**MUSC** Yes, we don't introduce anything in the clinics until the D1s and D2s have used them in lab.  
**VCU** Mostly. There are some minor differences.

C. If there are differences, how are they reconciled?

**UAB** No response submitted  
**UFL** No response submitted  
**ECU** No response submitted  
**GRU** No response submitted  
**UKY** Older materials that are not out of date are being used up before changes are made.  
**ULSD** No response submitted  
**MMC** No differences.  
**UNC** No response submitted  
**NOVA** No response submitted  
**UPR** No response submitted  
**MUSC** No response submitted  
**VCU** Cost and space in the clinic; learning techniques in the pre-clinic. We currently have a new avenue to reconcile such issues through the Practice Affairs Committee.

D. What methods/systems are taught for polishing composites?

**UAB** No response submitted  
**UFL** Mostly finishing and polishing burs, and the Soflex and Jiffy systems.  
**ECU** Finishing burs, Soflex discs, Jiffy kit.  
**GRU** Finishing – carbide finishing burs, but we are changing to diamond finishing burs. Polishing –Soflex disks (thin) and strips, diamond impregnated rubber points, Enhance points, aluminum oxide paste all available.  
**UKY** Brassler Polishing system with Diacomp points; Ultradent Jiffy Polishing system; Caulk Pogo and Enhance  
**ULSD** Finishing burs (if needed), rubber points, Soflex discs, Enhance, Pogo.  
**MMC** Finishing burs, polishing points and discs.  
**UNC** We teach the use of finishing carbides/diamonds until the desired morphology has been achieved and then use of abrasive impregnated rubber point/cup/disc systems (ET Illustra).  
**NOVA** 12 Flute finishing-30 flute finishing-Enhance Finishing cups, points and disks-Soflex Disks (anterior restorations)- Jiffy points and cups  
**UPR** No response submitted  
**MUSC** Finishing burs then Soflex or rubber points then finishing strips, then surface sealant

**VCU** Soflex discs, finishing strips, Enhance cups, discs and points, polishing paste, composite finishing kit (contains finishing burs with polishing points/cups/discs and brushes). The Enhance system is available in clinic but not pre-clinic.

E. Are any bulk fill composite techniques taught? If yes, please describe.

**UAB** No response submitted

**UFL** Students are taught the restorative techniques of bulk fill and layering for veneers only. All other types of composite restorations are taught using the layering technique.

**ECU** No

**GRU** No

**UKY** No

**ULSD** No

**MMC** No

**UNC** Kerr Sonic fill has been briefly evaluated. In depth *in vitro* and *in vivo* testing is indicated. The concept is briefly discussed in didactic settings.

**NOVA** No

**UPR** No response submitted

**MUSC** No

**VCU** Not currently at the pre-doctoral level, but they have been using it some in the AEGD clinic.

F. Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? What about new techniques – how long to implement into pre-clinic labs and clinics?

**UAB** No response submitted

**UFL** There are great variations of time for implementation of new materials and techniques due to departmental and clinical administration issues.

**ECU** Don't know yet. We are all new.

**GRU** New techniques which are significantly different from that which they replace, e.g. provisionalization with bis-acryl instead of methyl-methacrylate resins, are introduced first into pre-clinic, thereby taking 2-3 years to reach all clinics. Minor differences, e.g. unit-dosed versus bottles of adhesive or paste/paste cement are often introduced into clinics, with old stock used up in pre-clinic. Introduction of light cured CaOH (Ultrablend) is taking about 3 years.

**UKY** It has been my experience that it has taken five years to implement changes; materials and new techniques, but this has recently changed for pre-clinical and clinical materials and techniques.



**ULSD** Once new materials have been approved for incorporation into the curriculum, how long does it take to get the new materials into the pre-clinical labs and clinics? I have not kept a record of this time line. If a new material is replacing a currently used material, we generally use up the supply of the current material. If a new material is replacing a current material and the manufacturer of the new material “buys back” or replaces the current material, the transition is fairly quick. If a new material is approved, the time depends on how quickly the company can ship the material. What about new techniques – how long to implement into pre-clinic labs and clinics? It depends on the technique. Again, I have not kept a time log on this type of scenario. We require that new techniques have evidence of being more effective than current techniques. Literature searches may be necessary. If new materials are involved in the new technique, that would be manufacturer dependent. If we read articles (and we have) that it is perfectly safe to leave large amounts of infected dentin under restorations, we will probably not jump on that change until the licensing boards indicate that they will no longer be requiring a caries removal check.

**MMC** ! week

**UNC** New materials ideally are introduced pre-clinically first and not into the clinics until those students are entering the clinics. I’m sure we have not accomplished this every time.

**NOVA** In terms of instrument kits they would be incorporated into the next entering class if the decision was made before the instrument kits are ordered. After approval from the respective departmental Chair the products can be implemented in the clinic immediately. See below:

**Pre-doctoral Protocol to Introduce New Product into Patient Clinic**

1. Student must fill out the new product form and submit to both team leader and respective pre-doctoral director. (Instructor wanting to introduce new product would submit form directly to respective pre-doctoral director)
2. Pre-doctoral director evaluates and takes to Chair of respective department
3. The Chair will evaluate the product and confirm with Kathie Lowe that the new product will not cause a sterilization problem
4. Decision of Chair will proceed back through respective pre-doctoral director to the instructor or to the student’s team leader
5. Product will not be used until Chair has rendered an official decision through the pre-doctoral director

**Pre-doctoral Protocol for Dental Product Directions for Use**

1. All products in the pre-doctoral clinic will be utilized following the manufacturer’s directions for use (DFU)
2. Oversight will be the responsibility of the Department Chairs and they should perform a review bi-monthly with the dispensing assistants as well as with their pre-doctoral directors and team leaders
3. Any deviation from this protocol identified by the Quality Improvement Committee will be brought to the attention of the appropriate Department Chair. The outcome of how this inconsistency was dealt with must be reported back to the committee in a timely manner.

What about new techniques - hoe long to implement into pre-clinic labs and clinics? This would depend on the technique. We prefer to introduce in the pre-clinic first.

**UPR** No response submitted

- MUSC** A year; nothing goes into the clinics that hasn't already been used in the labs. That means the seniors are exposed to changes and they are better able to roll with it.
- VCU** Not long, once it has been approved.

#### IV. SCHOLASTIC

##### A. What is considered scholarly activity at your institution?

- UAB** No response submitted
- UFL** The standard for the breadth and depth of scholarly activity/original research will vary directly with the expectations of the discipline, faculty track, and position description. For those individuals in the traditional tenure-accruing track with significant time allocated to scholarly pursuits, there must exist a body of original research, scholarly activity, or creative work sufficient in quality and quantity to lead to or have led to a national/international reputation in the faculty member's field. There must also be strong indications of a commitment to original research or creative work that will lead to sustained contributions over time and to the judgment that growth in stature will continue or be maintained. External evaluations of the candidate's contributions to original research or creative work are a required component of a positive case for promotion or tenure of an applicant with a significant research time assignment. The quantity, but not quality, of the scholarly activity may vary in proportion to the individual job description.
- ECU** The usual publications, presentations, and research funding.
- GRU** Original research in peer-reviewed journals, preferably with external funding, and to a far lesser extent, case reports in peer-reviewed journals.

**UKY** *Clinical Positions*  
Administrative assistance

Your primary job responsibilities have been outlined in the attached job description. Every year each faculty member establishes his or her distribution of effort (DOE) for the coming year through discussions with the Division Chief and Department Chair. For your initial year, your distribution of effort will be as follows:

Instruction (Clinical and Didactic Teaching)	85%
Research, Scholarship, and other creative activities	5%
Professional Development	5%
Service	5%

Faculty positions change and evolve over time as new teaching, service and research opportunities develop. Similarly, the faculty responsibilities must necessarily evolve to meet these needs. In response to these changes, each faculty's DOE may change to accommodate the College's needs. During the year you may be asked to engage in other assignments associated with the Division of Restorative Dentistry.

A faculty position at the University of Kentucky involves teaching, scholarship and service. The College will provide guidance and development opportunities in all three areas.

We are excited about the possibility of working with you in the future and all the positive energy and direction that we anticipate you will bring to our College. This offer is in effect until September 6, 2012 at 8:00 am. If you need further clarification of if you wish to discuss any aspect of this

## **DEFINITION OF TEACHING, SCHOLARLY ACTIVITY AND SERVICE**

### **1.0 INTRODUCTION**

The faculty of the institution are collectively responsible for professional contributions to the areas of teaching, service, and research and scholarly activities. As stated in UW-Stout 3.06, "the relative importance of these functions in the evaluation process shall be decided by departmental, school, college, and institutional faculties in accordance with the mission and needs of the institution." In establishing their professional expectations, all levels of administrative units, beginning with departments, shall incorporate the following definitions in their evaluation process in making recommendations for promotion, tenure, retention, and merit.

### **2.0 TEACHING**

Faculty participates in the teaching-learning process in these ways: instruction, evaluation, student-academic advisement, academic program planning, and curriculum development.

Instruction is the imparting of knowledge, developing of skills and attitudes, and meeting of special needs in various ways ranging from structured to individualized activities, including instructional support activities which aid and enrich the teaching-learning process.

Evaluation is vital to the instruction process and is a basis for academic program planning and student advising.

Academic advising is the sharing of information between faculty and student regarding the student's academic progress or professional goals, and assists the student in maximizing the benefits from the educational experience.

Academic program planning identifies educational goals and contributes to their implementation.

Curriculum development may be directed towards either course or program development and may involve credit or non-credit activities. This is facilitated by individual involvement and collaboration with colleagues, and recommendations to the appropriate committees where necessary.

### **3.0 RESEARCH AND SCHOLARSHIP**

Faculty participates in applied and theoretical research and scholarship through activities which lead to the application or utilization of knowledge and invention, and to creative activities which produce new works of literature,

music, and the fine arts. The results of scholarly, creative or applied research may be shared by performance, exhibitions, oral presentations, publications, or application of innovations on or off campus.

Research and scholarship play a vital role in faculty, program and course development contributing to both individual professional fulfillment and teaching excellence.

As the faculty chooses to engage in research and scholarly activities, the University will provide support whenever possible. The departments will identify the roles of research and scholarship for their respective disciplines and define the relationship that these activities will play in personnel matters such as promotion, tenure, retention, and merit.

Each academic department must establish their own definition of research that will guide faculty through promotion and the pre and post tenured-processes. The departments' definition(s) of research should be in accordance with the established definition of research found in the Faculty and Staff Unclassified Handbook under Definition of Teaching, Research and Services (UW-Stout 85-40), subsection Research and Scholarship.

#### **4.0 PROFESSIONAL AND PUBLIC SERVICE CONTRIBUTIONS TO THE INSTITUTION**

Faculty participates in professional and public service and makes contributions to the institution through utilization of special skills or expertise in the resolution of problems or in application to specific needs.

Professional service may include memberships and leadership in professional organization; attendance, participation and presentations at professional meetings, conferences, workshops and in-service sessions.

Public service is the application of professional expertise by active involvement as an advisor or consultant to business, government, and non-campus groups. Consulting may be contractual or non-contractual, paid or unpaid.

Contribution to the institution includes governance activities as a member or resource to appointive/elective groups or committees at the System, University, school/division, department or discipline levels. It also includes serving as an advisor to on-campus groups or individuals.

#### **5.0 USE OF DEFINITIONS**

The above definitions will be used for at least the following purposes:

- 5.1 Departments shall use these definitions for clarification of departmental expectations regarding teaching, research, and service, and shall incorporate these definitions where appropriate in Department By-Laws. Such inclusion shall be made by the time the By-Laws are submitted for review.
- 5.2 Departments shall use the definitions for making departmental personnel policies and personnel decisions.
- 5.3 Schools and colleges shall incorporate the definitions, where appropriate for use, into their By-Laws.
- 5.4 Schools and colleges shall use the definitions in making their personnel decisions and policies.
- 5.5 University and Faculty Senate committees shall use the definitions in making their recommendations regarding University policies and procedures.
- 5.6 University and Faculty Senate committees shall use the definitions in making their personnel decisions.

**University of Kentucky  
College of Dentistry**

**Revised Position Description**

**Department:** Oral Health Practice

**Position Title:** Faculty Member, Division of Restorative Dentistry

**Series:** Special Title

**Rank:** Assistant Professor or Above

**Position Description:**

This is a faculty position with major emphasis on instructional activities. Patient care, service, and limited creative responsibilities are also included. A minimum of 50-60% effort is devoted to teaching the principles and techniques of restorative and/or prosthodontic dentistry to dental students in preclinical and clinical courses. Responsibilities may include directing one or more required courses and/or elective courses with attendant course preparation, development, and student tutorial responsibilities. This position will devote 20% to patient treatment. The remaining time will be spent in professional development, service, scholarly, and research activities.

**Primary Funding Source:** College funds

**Responsibilities:**

- Teach in two or three pre-clinical technique courses. Provide out-of-class help with student laboratory projects.
- Assume directorship/co-directorship of one technique course.
- Provide supervision and instruction in three restorative/prosthodontic clinical courses.
- Assume directorship/co-directorship of one clinical course.
- Participate in the development, implementation, and evaluation of educational programs in the department.
- Advise at least three undergraduate students.
- Participate in educational or clinical research activities pertinent to the teaching or practice of restorative/prosthodontic dentistry. Publish results in professional journals.
- Participate in multidisciplinary research relevant to clinical restorative/prosthodontic dentistry.
- Provide high quality dental treatment for personal patients two half-days per week.
- Participate in professional continuing education programs to remain eligible for licensure.
- Serve on departmental, college, and university committees.

### **Qualifications:**

- D.M.D. or D.D.S. degree from a CODA accredited institution or proof of graduation from a non-CODA accredited dental school and evidence that the degree makes the candidate eligible to practice dentistry in the jurisdiction from which the applicant graduated.
- Evidence that the candidate is eligible to receive an unrestricted Kentucky dental license or a Kentucky Faculty license.
- Experience and expertise in the practice of general dentistry or prosthodontics. Refer to UKCD policies 03-30 and 03-31.
- Post-doctoral training in operative dentistry or prosthodontics desired, but not required.
- Experience in dental education desired, but not required.

### **Percent Time and Effort:**

- |                            |     |
|----------------------------|-----|
| • Instruction              | 52% |
| • Patient care             | 20% |
| • Scholarship              | 20% |
| • Professional development | 6%  |
| • Service                  | 2%  |

### **Criteria for Appointment and/or Promotion:**

Promotion and tenure shall be granted in accordance with University of Kentucky Governing and Administrative regulations. Candidates for promotion will be evaluated in terms of their success in meeting the requirements of this position description.

#### **A. Assistant Professor**

Promotion to assistant professor shall be made after it has been determined the individual possesses the credentials and abilities for effective teaching and University service. Specifically the individual must:

- Possess a D.M.D. or D.D.S. degree from a CODA accredited institution or proof of graduation from a non-CODA accredited dental school and evidence that the degree makes the candidate eligible to practice dentistry in the jurisdiction from which the applicant graduated.
- Possess the clinical experience and expertise in restorative and/or prosthodontic dentistry necessary to teach dental students.
- Demonstrate potential for growth in teaching, patient care and creative productivity.

#### **B. Associate Professor**

Promotion to associate professor shall be made only after an indication of continuous improvement and contribution of the individual in teaching, student relations, service and scholarly activity consistent with the distribution of effort. Regional recognition is required. Specifically, promotion to the rank of associate professor requires:

- Continuing growth and improvement in performance and achievement of excellence as a teacher and practitioner as assessed by students, alumni and peers.
- Service to the University, the profession and/or the public.
- Professional, creative, and scholarly activity commensurate with the distribution of effort as demonstrated by innovative or creative instructional approaches, presentation of papers, or publications.
- State and regional professional status and recognition.

#### **C. Professor**

Promotion to professor is an indication that his/her colleagues regard this person as outstanding in teaching, patient care, scholarship and service. National and perhaps international recognition is expected. This rank is recognition of achievement, not length of service. Specifically, the individual will have achieved the following in addition to possessing the qualifications for Associate Professor:

- Outstanding performance as a teacher and a practitioner as determined by students, peers and alumni.
- Outstanding contributions to the University, the profession, and /or the public.
- Outstanding professional status demonstrated through leadership in the profession, scholarly activity and peer recognition.
- National or perhaps international recognition.

## **ULSD Research, Scholarship and Other Creative Activity**

### **Definition of Research, Scholarship and Other Creative Activity**

Creative Activity is the generation, documentation and dissemination of ideas and new knowledge. It may be as discovery of new knowledge (research) in the laboratory, in the classroom, or community, or may be in new patient treatment methods or materials. The faculty member may also demonstrate creative activity through the dissemination of knowledge, methods or techniques to the profession through peer-reviewed publications, through texts, monographs, or reports. Inquiry about the science and practice of dentistry may include scholarly activity in the biological, physical, behavioral and clinical sciences. The individual's pursuit of advanced training, certification or credentials shows continuing scholarship of the individual. Collaborative research activities are considered appropriate and desirable in the academic setting and are to be considered an integral part of the publication record of the candidate. The faculty bases this philosophy, in part, on the belief that multiple interested individuals working in cooperation can, through shared insight and pooled effort, render effective and thorough attention to scholastic endeavors. Furthermore, we see the encouragement of joint scholastic projects as advancing the spirit of academic cooperation and interchange of ideas between individuals of different backgrounds, disciplines, units and areas of expertise. Therefore, the order of authorship (or other alleged ranking of effort) is not a criterion for consideration in promotion or tenure review decisions. Principal investigators on multiple-principal investigator grants will be rewarded commensurately to those on single-principal-investigator grants.

### **Evaluation of Research, Scholarship and Other Creative Activity**

Evidence of research or creative activity can be presented in several ways. The candidate is encouraged to submit material subjected to peer review, such as peer-reviewed journal publications and extramural grants. Besides the quality of the scholarship, the evaluator will review the candidate's efforts with particular attention to the promise of future contributions to the University of Louisville.

Primary Scholarly Activities are major works that are evidence of scholarly activity. They include:

1. Published research, technical reports, or case reports. (This includes studies in laboratory based, clinical, diagnostic, epidemiology/survey, business and practice management, health care delivery methods/organization, data management and communications, professional history, related anthropology, law, jurisprudence, ethics or environmental studies.)
2. Extramural and intramural funding. (This includes grants, contracts, and the dollar value of in-kind gifts.
3. Published books or texts (or chapters in texts) in the faculty member's field of expertise.
4. Patents

Supportive Scholarly Activities are less important than primary activities as evidence of scholarly work. However, they contribute to the demonstration of scholarly activity. Reviewers will weigh them as to their importance in contributing to the School's mission and the individual's completion of the AWP. Examples include:

1. Extramural grant reviewer / study section member
2. Non peer-reviewed products such as manuscripts

3. Publication in peer-reviewed media (including but not limited to text, web-based, CDROM)
4. Publication in professional, non-peer-reviewed journals
5. Proceedings of scientific meetings
6. Editorship of a peer-reviewed publication (journal)
7. Investigators on grants
8. Invited lectures and presentations, continuing education presentations
9. CD-ROM, web, or computer based instructional materials
10. Consultantships and invited Expert Opinions
11. Manuscripts or research in progress
12. Other entrepreneurial activities as outlined in the AWP.
13. Completing graduate degrees and certificates, receiving postdoctoral training, or board certification.

**MMC** Research; grant writing, journal publications, development of new teaching materials and course preparation, i.e. Power points presentations, etc.

**UNC** The following is copied from the UNC School of Dentistry Promotion and Tenure Manual:

"Scholarly activity is a central mission of a research university. The components of scholarly activity are: the compilation, synthesis, and transmission of current knowledge; and the generation of new knowledge through original research and publication of the findings. All faculty in the tenure track and appropriate fixed-term faculty must engage in scholarly activity, a major portion of which must be original research. In the evaluation of this aspect of promotion, attention shall be directed to the time a person has had for scholarly activity, the guidance and support provided to expand that time, and the resources available to enhance productivity. In all instances, the quality of the scholarly activity, as judged by authorities in the field, will be the critical measure."

**NOVA** This document is presently being revised.

**UPR** No response submitted

**MUSC** Engaging in research and publishing associated articles.

**VCU** Publishing abstracts and articles in peer-reviewed, professional journals, presentations to local, state, regional, or national audiences, published chapters in books, and/or monographs, funding of an original investigative proposal, supervised student research, etc.

B. What are the expected standards for Assistant, Associate, and Full Professors?

**UAB** No response submitted



**UFL** Tenure Track:

Assistant professor: Appointment at this rank requires an earned doctorate (D.M.D., D.D.S., DVM, M.D., and /or Ph.D., or equivalent) from a recognized academic institution. It is expected that the doctorate would be in a discipline relevant to the appointing department. Post-doctoral training, although not necessarily mandatory, may be included as required qualifying criteria for the position or make a candidate more competitive relevant to another.

Appointment at the rank of assistant professor with tenure is not permitted under any circumstances.

Associate professor: The rank of associate professor shall indicate a sustained record of professional achievement. Outstanding achievement must be demonstrated in research/scholarly achievement and in teaching or service (usually clinical care). Appointment at this rank will be made almost exclusively without tenure and must satisfy all of the requirements for appointment at the rank of assistant professor. It is expected that the appointee will be at the mid-career level, have a record of excellence in research and teaching, and be achieving national prominence in his or her field.

Professor: The rank of professor shall be reserved for those who have been accepted and recognized nationally and internationally for the distinction and excellence of their professional achievements. Outstanding achievement must be demonstrated in research/scholarly achievement and in teaching as well as service. Appointment at this rank may be made with or without tenure and is reserved for senior faculty with a continuous record of excellence and productivity in research and teaching, national and international recognition for expertise in their field, and the potential to make further significant contributions to their field, to the college, and to the university.

**ECU** This is a very regimented process here. The creation of a Personal Action Dossier or PAD is a nightmare from the Undergraduate Campus that we must abide by. It is too lengthy of a process to be described in this document. It is more regimented than any other institution that I have experienced.

**GRU** No restorative dentist has been appointed on tenure track for the last 10 years. See response to next question.

**UKY** See response to previous question

## **ULSD** Section 2 Criteria for Appointment or Promotion to Faculty Ranks

### A. General Considerations

1. All faculty appointments (part-time, term, probationary or tenured) must meet the same requirements for appointment or promotion to the various levels in areas specified in their AWP's. The Annual Work Plan (AWP) guides these faculty efforts. The Chair evaluates all faculty members in the areas specified in the Annual Work Plans. The Chair must insure that faculty members who have long range plans involving promotion are allocated time to accomplish the requirements of the various levels.
2. Part time faculty titles include the phrase "Clinical" before the rank. Term faculty titles include the phrase "Term" after the rank. (For example, a Clinical Associate Professor is a part time faculty member. A Professor (Term) is a full time (Term) faculty member.)
3. Initial appointments for term, probationary or tenured appointments must be reviewed by the School of Dentistry Faculty Personnel Committee for recommendation for rank (and tenure, if appropriate) before appointment by the Dean.
4. Appointments for all Lecturer appointments are made through the School of Dentistry. All Gratis, Part-Time, Term, Probationary, Tenured and Emeritus appointments are made through the University Board of Trustees.
5. Only members of the administration (including persons acting in the capacity of Chair) who have themselves completed the requirements of academic tenure may issue recommendations concerning the qualifications of faculty members in academic tenure or promotion decisions.

B: Requirements: The following are the requirements for faculty appointments at the various levels.

1. Gratis: Candidates for Gratis Appointment must actively show a commitment to the educational, research or service missions of the school, maintain a clinical license in good standing (if applicable) with appropriate regulatory Boards, and must maintain a personal profile that positively reflects the University of Louisville School of Dentistry.
2. Lecturer: Candidates for Lecturer must have an earned terminal degree in their field of work. The Lecturer's appointment is for one calendar year.
3. Instructor: The candidate must possess a terminal degree in the field. Appointment at the rank of Instructor is for those faculty members whose long-term plans do not include qualifying through the ranks of faculty appointment, or those who are new to academe and do not yet qualify for appointment at the rank of Assistant Professor.
4. Assistant Professor: All the criteria for the Instructor's appointment apply. In addition, the candidate will have shown experience (typically one year) in teaching, service or scholarship or advanced training. The promise of proficiency in scholarship, teaching and service is critical in assessing a candidate's suitability for appointment or promotion.
5. Associate Professor: All the criteria for the Assistant Professor's appointment apply. In addition, the candidate will have clear documentation of demonstrated proficiency in each of the three areas: scholarship, teaching, and service as described in this document. The candidate must show the promise of continued proficiency and development of excellence in the area of greatest concentration on the Annual Work Plans. A total of five years as an Instructor/Assistant Professor is the usual time of service before consideration for promotion to the rank of Associate Professor.

6. Professor: All the criteria for Associate Professor's appointment apply. In addition, the candidate will have proved excellence in his/her field of professional expertise (scholarship, service, or teaching) and proficiency in the other areas outlined in the Annual Work Plans. They will show national recognition by peers for their work in their field of expertise. The individual should exhibit promise of continued professional excellence to the fulfillment of the School's and the Department's mission. A period of five years as Associate Professor is the usual minimum time of service needed to prove continuing, sustained proficiency and excellence.

7. Tenure (for tenurable appointments): The successful candidate must prove proficiency in each area of Teaching, Service and Scholarship. Tenure decisions often (though not necessarily) coincide with promotion to the rank of Associate Professor.

8. Emeritus: The Emeritus appointment recognizes a history of outstanding teaching, service, or scholarship. The candidate must have retired from the University. They must have held the rank of Associate Professor or above for a minimum of five years and had fifteen years minimum in full-time higher education or part-time equivalent (twenty years of service for part-time faculty members). The Faculty Personnel Committee will review the credentials of a faculty member nominated for an emeritus appointment and forward their recommendation to the Dean.

- MMC 8.3.4 Assistant Professor-** Master's degree in relevant area (non-physicians/non-dentist) – All schools except in basic science departments; Ph.D. or earned doctorate in a relevant area – All schools; D.D.S., D.M.D. or equivalent degree– School of Dentistry; M.D. or D.O. or equivalent degree such as the MBBS and board certification/board eligibility in appropriate specialty – School of Medicine; D.V.M. or appropriate terminal degree with experience as determined by the department's committee – All schools.
- 8.3.4.1 Three (3) years at the rank of instructor or at least two (2) years as a post-doctoral research fellow or equivalent; or board certification/board eligibility in appropriate date specialty.
- 8.3.4.2 Written description of teaching interest, research objectives and service goals.
- 8.3.4.3 Demonstrated professional competence in a specific discipline or field and potential for continued growth and development in said discipline or field.
- 8.3.4.4 Demonstrated potential in teaching and contributions to the overall educational program.
- 8.3.4.5 Demonstrated potential for scholarly activity.
- 8.3.4.6 Candidates proposed as outstanding in clinical service should have demonstrated excellence in the quality of care provided.
- 8.3.4.7 Candidates proposed as outstanding in professional or community service should have demonstrated active participation in the administrative affairs of the department and/or his/her profession. Candidates proposed as outstanding in teaching should have demonstrated a strong interest in and capacity for the teaching of health professional or biomedical science students or trainees.

8.3.4.8 Candidates proposed as outstanding in teaching should have demonstrated a strong interest in and capacity for the teaching of health professional or biomedical science students or trainees

8.3.4.9 Candidates proposed as outstanding in scholarship shall have demonstrated some accomplishment in scholarly activity and exhibited potential for independent scholarship.

**8.3.5 Associate Professor-**Ph.D. or earned doctorate in a relevant area – All schools; D.D.S., D.M.D. or equivalent degree– School of Dentistry; M.D. or D.O. or equivalent degree such as the MBBS – School of Medicine; D.V.M. or appropriate terminal degree with experience as determined by the department’s committee – All schools.

8.3.5.1 At least three (3) years of professional experience at the rank of assistant professor or equivalent.

8.3.5.2 Board certification in area of specialty, if applicable.

8.3.5.3 Written description of teaching interests, research objectives, and service goals.

8.3.5.4 Evidence of continued improvement of professional competence in field of specialization and/or clinical service.

8.3.5.5 Evidence of an emerging national reputation in at least one area of academic endeavor.

8.3.5.6 Demonstrated scholarly activity.

8.3.5.7 Demonstrated competence in teaching. 8.3.5.8 Candidates proposed as outstanding in clinical service should have:

8.3.5.8.1 Demonstrated excellence in the quality of care provided and obtained at least local or regional recognition in his/her specialty or area of expertise.

8.3.5.9 Candidates proposed as outstanding in teaching should have:

8.3.5.9.1 Significant contributions to the educational program of the department, demonstrated leadership and innovation, and judged to be an effective, conscientious and fair teacher.

8.3.5.9.2 Demonstrated independence, productivity and creativity as exemplified by publications in refereed journals, publication of teaching material on teaching websites, presentations and local and national meetings, and/or development of new curricula.

8.3.5.10 Candidates proposed as outstanding in scholarly activity should have:

8.3.5.10.1 Demonstrated independence, productivity and creativity as exemplified by publications in refereed journals for a sustained number of years; and/or

8.3.5.10.2 Acquisition of a competitive research grant as a principal investigator/a major co-investigator/ collaborator in a collaborative research grant.

8.3.5.11 Candidates proposed as outstanding in professional or community service should have:

8.3.5.11.1 Assumed a leadership role in the department, school or college, and demonstrated active participation in his or her profession outside of the college at a regional or national level.

**8.3.6 Professor:** Ph.D. or earned doctorate in a relevant area – All schools; D.D.S., D.M.D. or equivalent degree – School of Dentistry; M.D. or D.O. or equivalent degree such as MBBS – School of Medicine; D.V.M. or appropriate terminal degree with experience as determined by the department’s committee – All schools.

8.3.6.1 At least five (5) years of professional experience at the rank of

associate professor.

8.3.6.2 Board certification in area of specialty, if applicable.

8.3.6.3 Evidence of a national reputation in at least one area of academic endeavor.

8.3.6.4 Outstanding in clinical service and demonstrated sustained record of superior quality in the provision of patient care within the chosen discipline.

8.3.6.5 Outstanding in professional or community service with a leadership role in the department, school or college, and demonstrated leadership in his or her profession outside of the college at a national or international level.

8.3.6.6 Outstanding in teaching with a demonstration of an effective teacher in a formal setting, made important contributions and innovations in teaching and should have had primary responsibility for a course, clerkship or training program.

8.3.6.7 Outstanding in scholarship with a demonstrated significant accomplishment that includes national and/or international recognition of scholarship exemplified by:

8.3.6.8 A sustained exemplary record of publication including peer-reviewed articles in leading journals, and/or authorship of important review articles, chapters and books; and/or

8.3.6.9 A sustained pattern of obtaining and competitively renewing funding for peer-reviewed research as; (a) principal investigator of an independent research program, (b) a major co-investigator/collaborator in a collaborative research grant.

**UNC** Please refer to the UNC SOD Promotion and tenure Manual, pages 8 - 13.

**NOVA** This document is presently being revised.

**UPR** No response submitted

**MUSC** PUBLISH!

**VCU** Emphasis is placed on ongoing activity in the areas of teaching, service, and scholarship and professional growth for all faculty, with greater expectations for associate and full professors, versus assistant. For example, funding for an original investigative proposal for associate, national authority in one's field for full professors, etc.

C. If your institution has clinical tracks, what are the expected standard levels for each level?

**UAB** No response submitted

**UFL** Clinical Track:

Appointment as a clinical assistant professor: Must have the appropriate degrees, specialty training, or advanced training, and experience as determined by the hiring department. Be qualified to contribute positively in the clinical and didactic teaching programs of the college. Be a high quality clinical/professional practitioner. Be committed to working actively in the professional services and contributing service to support the operation of the department, college, and the university.

Appointment as a clinical associate professor: Must have the appropriate degrees, specialty training or advanced training, and experience as determined by the hiring department. Have demonstrated growth and outstanding performance in clinical practice and clinical teaching. Have a record of positive contributions in service to the department, college, and university. Demonstrate potential for national and international recognition in his or her professional area.

Appointment as a clinical professor: Have a lengthy record of excellence of achievements in clinical teaching, service to academia and the profession, and clinical practice. Be widely acknowledged by his or her peers as exemplary in the field at national and international levels.

- ECU** There are clinical tracks. Assistant, Associate and Professor levels are by academic experience and publication just as the Tenure Track is. More emphasis on teaching and almost no expectation for Research.
- GRU** Assistant - Authorship or co-authorship on at least 1 peer-reviewed publication per year since last promotion or appointment at GHSU.  
Associate/Professor - Authorship or co-authorship on more than 1 peer-reviewed publication per year since last promotion or appointment at GHSU.  
External funding preferred
- UKY** See response to previous question
- ULSD** See response to previous question
- MMC** See response to previous question
- UNC** Please refer to the UNC SOD Promotion and tenure Manual, pages 8 - 13.
- NOVA** This document is presently being revised.
- UPR** No response submitted
- MUSC** See response to previous question.
- VCU** Same as above, with more emphasis on additional research accomplishments for tenure.

## **V. DENTAL COMPOSITE RESTORATIONS AND PSYCHOSOCIAL FUNCTION IN CHILDREN**

- A.** What, if any, are the implications of the following article? Summarize and report the discussion.

*Dental Composite Restorations and Psychosocial Function in Children.* Maserejian Nancy N., Trachtenberg Felicia L., Hauser Russ, McKinlay Sonja, Shrader Peter, Tavares Mary, and Bellinger David C. Pediatrics originally published online July 16, 2012. DOI: 10.1542/peds.2011-3374.  
<http://pediatrics.aappublications.org/content/early/2012/07/11/peds.2011-3374.full.pdf+html>

*“In the trial, greater exposure to bisphenolA-glycidyl-methacrylate-based dental composite in children aged 6 to 10 years was associated with worse self-reported psychosocial functioning at 5-year follow-up. There were no such associations with exposure to dental amalgam or urethane-dimethacrylate-based polyacid-modified composite (compomer).”*

- UAB** No response submitted
- UFL** No response submitted

- ECU** We have taken the article into consideration and are informing our students so they may eventually inform their patients when choosing restorative materials.
- GRU** We will probably change to a UDMA or other resin system less toxic than BisGMA, but feel no great urgency to do so, since we treat only adult patients. Would ask Pedro Residency director for input.
- UKY** No response submitted
- ULSD** Implications: Child behavior can be affected by prenatal exposure to bisphenol A (BPA), but not from post-natal exposure. One problem with restricting or banning a potentially harmful chemical is that scientists know even less about the chemicals that might be used as replacements.  
 Confirmations: Prenatal Bisphenol A Exposure and Early Childhood Behavior, *Environ Health Perspect.* 2009 December; 117(12): 1945–1952  
 Findings: prenatal BPA exposure may be associated with externalizing behaviors in 2-year-old children, especially among female children.  
 Impact of Early-Life BisphenolA Exposure on Behavior and Executive Function in Children, *Pediatrics*; originally published online October 24, 2011  
 Findings: gestational BPA exposure affected behavioral and emotional regulation domains at 3 years of age, especially among girls. Clinicians may advise concerned patients to reduce their exposure to certain consumer products, but the benefits of such reductions are unclear.
- MMC** No response submitted
- UNC** Initial review of the article reveals that the author's conclusions appear to be supported by the data provided. The article is in support of the notion that dental amalgam is relatively safe. Further studies will need to identify which components of the composite and/or adhesive system(s) used may be implicated.
- NOVA** The conclusions from the article supported the hypothesis that greater exposure to bisGMA based dental composites have a negative outcome on self-reported psychosocial function in children. “The analysis found clinically significant scores were 2 to 4 times more common among children with higher composite exposure” The study did point out that the observed associations were with composite resin and not directly attributed to BPA. “Thus it remains unclear whether our observed associations are attributable to BPA or to some other chemical component of the composite intervention”. Since the UDMA resin did not show negative psychomotor outcomes it seems plausible that the results were due to increased bisGMA exposure. The implications from this study point to the implementation of bisGMA free resins. At this time many of the resins made out of the country are bisGMA free.
- UPR** No response submitted
- MUSC** Amalgam, good; composite, bad. Too bad the IRB forced them to discard the blood samples after the original study; they might have given us some really important data about the amount of BPA in these kids plasma.
- VCU** We have questions regarding the association between composite and psychosocial functioning. Could there have been other contributing factors? It seems to be a very significant claim to link psychosocial function to composite.

B. In the last five years, has your College/School made policy changes that impact/restrict the utilization of amalgam? If yes, what are the changes and the rationale for such changes?

- UAB** No response submitted  
**UFL** No  
**ECU** We do not have a track record to impact. We will be utilizing both amalgam and composite restorative materials here.  
**GRU** No  
**UKY** No  
**ULSD** No  
**MMC** No  
**UNC** We remain fully in support of amalgam use and that it is indicated over composite resin in high caries risk patients. (*Bernando et al J Am Dent Assoc 2007, Opdam et al J Dent Res 2010*)  
**NOVA** No  
**UPR** No response submitted  
**MUSC** None whatsoever.  
**VCU** No. However, we are, as we always have been, very aware of mercury hygiene, and strictly adhere to its proper handling. In addition, our students perform more composite restorations than amalgam.

## **VI. REGIONAL CODE AGENDA**

*To be established by the respective Region and Regional Director. Please also report on responses to the Regional Agenda by all participants.*

### **CARIES**

1. What concepts of caries are you teaching, how are you incorporating Caries Risk Assessment into clinical evaluation?

- UAB** No response submitted  
**UFL** We have developed clinical forms, protocols and a competency program for Caries Management based on CAMBRA, which are used in the DMD Team clinics since 2009. This program consists on the use of forms for assessment of patients' risk for caries and the subsequent development of a Caries Management and Preventive Plan based on individual risk. The "Caries Risk Assessment" and "Caries Management and Prevention Plan" forms were also developed to serve as clinical guidelines for disease assessment and treatment planning by DMD students and are required for every new patient. As part of the Caries Management Program, the students are required to perform one Caries Management Competency during each junior and senior year. Additional Caries Management Competencies may be done and averaged with other competencies in order to improve the semester grade. In this clinical competency, students are evaluated on their capacity to diagnose caries, to assess patients' caries risk, to develop and implement a preventive treatment plan, and to educate patients on prevention of caries and promotion of oral health (see attachment of axiUm instructions).  
**ECU** No response submitted  
**GRU** Are there multiple concepts of caries? CRA affects whether the intervention for early smooth surface caries will be preventive or operative, and whether daily-use fluoride is indicated.



**UKY** Chapter 4 of Summitt, page 89, table 4-6  
Decision to initiate treatment preceded by questions: lesion present, extension? Is caries active or not? Restorative intervention required or is it possible to remineralize by noninvasive treatment? Causative factors evaluated: diet, life style choices, socio-economic situation, and education. Risk evaluated before treatment considered. Diagnosis: AxiUm has a Caries Risk Assessment based upon x-rays and clinical findings as well as causative factors from above.

**ULSD** Caries is a disease process that progresses at variable speeds. Regarding the removal of deep caries, we teach that all infected dentin is to be removed except areas immediately adjacent to the pulp when exposure is likely. In most cases, we will place a thin layer of calcium hydroxide, place glass ionomer over the calcium hydroxide, followed by a temporary restoration. The tooth will be re-opened in about 6-8 weeks for final excavation (two step approach). In some cases, re-entry is not performed and a final restoration is placed over the glass ionomer. A restoration is always placed even though some authorities indicate that restoration may not be necessary (see below).  
*Treatment of deep carious lesions by complete excavation or partial removal. A critical review. The Journal of the American Dental Association June 2008 vol. 139 no. 6 705-712*

The following interview questions whether all teeth, even with cavitation, should be restored: (March 4, 2010)

Contrary to decades of tradition, dentists should leave carious dentin untouched in many lesions, researchers said Wednesday at the American Association for Dental Research (AADR) annual meeting. For years, dental professors have taught their students to remove all infected tissue from cavities and carefully shape the preparation before placing a restoration, said Edwina Kidd, B.D.S., F.D.S., Ph.D., D.Sc., a former professor at King's College London. "Does this fit with knowledge?" she asked. "I think the answer may be 'no,' which means I've been teaching unsubstantiated rubbish for 30 years." To explain why orthodox tenants of dentistry may be wrong, Dr. Kidd pointed to new findings about the microbiology of caries.

"Understanding of the caries process is essential to understanding the question," she said. "With regular disturbance of the biofilm, the caries can be arrested. This arrest can occur at any stage. The white spot lesion can be arrested. And the large cavitated lesion can be arrested because that lesion is open and accessible to plaque removal." On the other hand, placing a filling does no good if the patient isn't brushing properly, Dr. Kidd said. So when should restorations be placed? "When the patient can't access the plaque," Dr. Kidd said. A clinician might get away with sealing over the lesion, she said. For deciduous teeth, overhanging enamel can be removed to allow cleansing -- rather than filling -- of the lesion. And even when a restoration is needed, it may be sufficient to seal over the cavity without removing the infected tissue, said Dr. Kidd, citing four randomized, controlled trials of this approach. All patients receive a caries risk assessment. The assessment is reviewed during the treatment planning session with the Group Manager.

**MMC** No response submitted

- UNC** We teach that the key to caries management is understanding the balance between demineralization and remineralization. When demineralization becomes severe (with resultant cavitation) then managing the matrix becomes important as well. Chapter 2 of the 6th edition of Sturdevant's Art & Science of Operative Dentistry (Dental Caries: Etiology, Clinical Characteristics, Risk Assessment, and Management) has been completely revised and represents current national and international thought. Student exposure to this information begins in the first year of dental school. The UNC electron patient record has a dated caries risk assessment system that is used in the 4th year dental clinics (this is inadequate) and programming is currently underway to have full integration of risk assessment that is built in to the health/dental history questionnaires and the examination modules at all levels including the Dental Faculty Practice.
- NOVA** No response submitted
- UPR** No response submitted
- MUSC** I'm embarrassed to report that our school is not doing this. The students are exposed to all the information in various classes but nowhere are all the pertinent information pieces presented and directed at caries. There has been no "official" Caries Risk Assessment data recorded in the patient record here. I discovered that the Preventive Dentistry course was primarily an epidemiology course, a very good one, but not one with a caries management focus as I had assumed. Working with the national axiUm group (COHRI) since April we have developed a risk assessment form that will be implemented later this semester; and, as soon as work on the intervention piece is completed, a fully functioning axiUm based caries management program will be in use in our clinic. This program will be based on the CAMBRA model. Cariology content will be added to my Operative I course. Unfortunately this will be at the expense of some existing material; e.g., instrumentation and class V preparation for amalgam. My one lecture will expand to four or five on cariology subjects. And I'm hoping for some sample cariology course outlines from ya'll.
- VCU** We are teaching CAMBRA. Students perform a Caries Risk Assessment on every patient in axiUm, and offer home instructions and nutritional counseling to patients. Students are also learning ICDAS in the didactic course given in the sophomore year.

2. What clinical recommendations do you make based on that evaluation?

- UAB** No response submitted

**UFL** Clinical recommendations are made based on individual risk for caries: extreme, high, moderate or low. Below is an example of the Axium check list for management of patients at extreme risk for caries.

Our assessment indicates that you are at extreme risk of new dental decay in the near future and you have severe “dry mouth”. We want you to move to a safer situation to avoid new decay

- √ Review your dietary and oral hygiene habits with us and receive oral hygiene instructions
- √ Brush twice daily with a high fluoride toothpaste (5,000 parts per million fluoride; e.g. either Control RX or Prevident Plus toothpaste). This is to be used twice daily in pla\_\_\_\_. Floss your teeth daily
- √ Rinse once a day with a special antibacterial mouthrinse (e.g. Peridex or Periogard; chlorhexidine gluconate at 0.12 percent). You should use this once daily just before b\_\_\_\_
- √ Use a special paste that contains calcium and phosphate (e.g., MI paste, Oravive, Renew). Apply it several times daily to your teeth. We will teach you how to do this product
- √ Use a baking soda rinse (or similar neutralizing product) 4 to 6 times daily during the day. You can make this yourself by shaking up two teaspoons of baking soda in an 8 \_\_\_\_\_
- √ Receive the necessary restorative work such as fillings and crowns, as needed, in a minimally invasive fashion
- √ Chew or suck xylitol-containing gum or candies 3-4 times daily
- √ Get a thorough professional cleaning, as needed, for your oral health
- √ Get in-office fluoride application after teeth cleanings, sealants, if your dentist recommends it. You may or may not need this. It depends on your oral conditions.
- √ Get fluoride varnish treatment for all your teeth every 3 months at your caries recall exams
- √ Please return when requested for a caries recall exam in 1 to 3 months
- √ Get new bitewing radiographs (X-rays) about every 6 months until no cavitated lesions are evident.

Although this sounds like a lot of things to do and to remember, this intensive therapy is necessary to stop the rapid destruction of your teeth. It can really work, and if you are willing to put in the time and effort, you can clear up your mouth, gums, and teeth and avoid costly restorative dental work in the future

**ECU** No response submitted

**GRU** See response to previous question.

**UKY** Is treatment of a non-invasive nature possible? Perhaps even remineralization or must restorative be employed? After repeated homecare instruction and time to see if patient is compliant (3 mos) re-evaluation of the patient’s status is made to determine need for restorative intervention.

**ULSD** High risk patients will not receive posterior composite resin restorations and will be placed on supplemental preventive regimen (fluoride treatments, chlorhexidine rinse). Higher probability that minimal carious lesions will be restored in high risk patients.

**MMC** No response submitted

- UNC** Moderate to high risk patients require the identification of the source(s) of acidic conditions (Direct low pH such as acidic foodstuffs, stomach contents, Indirect low pH such as refined carbohydrates, acidogenic biofilm and Inadequate salivary buffering/flow from autoimmune disease and/or medication) and behavior modification through patient education and careful follow-up. Initial caries management may require use of caries control procedures designed to eliminate non-cleansable areas (cavitations etc) where biofilm accumulation can occur while behavior change is initiated, frequent recall and use of Fluoride Varnish. Saliva may need to be supplemented. Consultation with patient MD may need to occur to identify alternative medication options. UNC recommends fluoride as the best currently available means of limiting demineralization and promoting remineralization. Xylitol, ACP, CPP-ACP and combination medicaments (i.e. MI-Paste Plus) are not currently being recommended as we are waiting for reports from the clinical trials that are underway. High Caries risk patients may benefit from an initial 2 week regimen with 0.12% Chlorhexidine gluconate. The UNC DFP is prescribing Clinpro 5000 (F and tricalcium phosphate) and Prevident 5000 Plus. UNC dental clinics are prescribing Prevident 5000 Plus.
- NOVA** No response submitted
- UPR** No response submitted
- MUSC** The students I personally work with all have to answer my “what’s his caries risk?” question when getting a start check. The answer (usually “high” but distressingly often “Uhh, I don’t know”) forces them to rethink restorative material choice and preparation design because caries risk and all that implies was usually not considered at the treatment planning appointment. It was the answers I got to these questions in the clinic that tipped me off that preventive dentistry here was a lot of perio and epidemiology and not so much caries. Where this should happen is at the treatment planning appointment but it isn’t being done there on a regular, consistent basis. AxiUm will force it to happen there. Once axiUm diagnostic codes and the caries risk assessment forms are turned on and made mandatory, this will be forced to occur at the treatment planning appointment where it belongs.
- VCU**
- 1) identify risk factors
  - 2) give behavioral recommendations (dietary habits, oral hygiene instructions, etc.)
  - 3) give chemical recommendations for remineralization/ preventive therapies (MI Paste, PreviDent 5000 Plus, xylitol gum, dry mouth gels, baking soda rinses.)
  - 4) perform minimally invasive procedures as necessary.

3. What source material are you using to develop the criteria?

- UAB** No response submitted
- UFL** No response submitted
- ECU** No response submitted
- GRU** Given that the literature says that infected dentin can be safely left in cavity preparations, how much caries can be left without affecting the support and longevity of the restoration? Don’t know of a scientific answer to this. My personal bias is that if you’ve more than 1 mm, you should be placing an RMGI temporary.

<b>UKY</b>	<u>Fundamentals of Operative Dentistry. A Contemporary Approach, 3<sup>rd</sup> Edition,</u> Summitt, Robbins, Hilton, Schwartz.
<b>ULSD</b>	No response submitted
<b>MMC</b>	No response submitted
<b>UNC</b>	No response submitted
<b>NOVA</b>	No response submitted
<b>UPR</b>	No response submitted
<b>MUSC</b>	No response submitted
<b>VCU</b>	Current literature, Sturdevant's 6th edition text, Summit text, Operative meetings

## **CLASS II COMPOSITES**

1. What are your criteria for a Class II posterior composite?

<b>UAB</b>	No response submitted
<b>UFL</b>	There are no specific criteria for composite preparations and the criteria for composite restorations evaluate anatomy, cavosurface margins and restoration surface (See attachment of criteria for composite restorations).
<b>ECU</b>	No response submitted
<b>GRU</b>	Enamel gingival margin, rubber dam isolation

**Evaluation Criteria for a Class II Composite Resin Cavity Preparation****Occlusal Outline Form**

- A. Preparation is centered on major grooves. Extension out facial or lingual grooves is conservative, as dictated only by the extent of the caries.
- B. Facio-lingual width of preparation at isthmus is conservative, dictated by the extent of the caries.
- C. Mesial and/or distal pits are included in the outline form as dictated by the caries.
- D. Remaining pits and fissures are protected with sealant.
- E. Outline form is determined by the location and shape of the carious lesion (Unsupported enamel is not routinely removed).

**Occlusal Internal Form**

- A. The facial and lingual walls converge occlusally (2-5 degrees at each wall) or are parallel.
- B. The mesial and distal walls are parallel or converge occlusally (2-5 degrees at each wall).
- C. The pulpal depth is determined by the extent of the decay. (We will use 1.5 mm).
- D. The internal line angles are rounded and not sharp.
- E. The cavity is aligned with the long axis of the tooth.

**Proximal Outline Form**

- A. Facial and lingual proximal margins are extended only to include the carious lesion but allow placement of a matrix band and finishing. (We will use .25- .75mm limit on facial and lingual).
- B. Gingival margins are dictated by the extent of the carious lesion but permit placement of a matrix band and finishing. (We will use .5 - 1.0 mm distance from the adjacent tooth)
- C. The facial and lingual gingival line angles are not sharp (gently rounded)
- D. The gingival cavosurface margin is at right angles to the long axis of the crown.
- E. The proximal walls converge toward the occlusal (2-5degrees) or are parallel

**Proximal Internal Form**

- A. Retention grooves are only placed for slot-type proximal preparations.
- B. The axial wall facio-lingually parallels the DEJ. Occluso-gingivally, the axial wall parallels the long axis of the anatomical crown.
- C. The axial wall depth is dictated by the caries or 0.2mm into dentin.
- D. The line angles are definite but not sharp. The axiopulpal line angle is rounded (not sharp)

**Margins and Finish**

- A. No debris, moisture or oily substances are present anywhere in the preparation or on the tooth.
- B. Cavosurface angles are 90-110 degrees and margins are crisp, definite, and regular.
- C. All cavity walls are free of scratches or gouges
- D. The adjacent tooth has not been abraded or nicked.
- E. The dentoform is clean and well kept **NEATNESS COUNTS !!**

## Evaluation Criteria for Class II Composite Resin Restorations

### Composite Insertion

- A. The surface is smooth. There are no voids, pits or soft areas in the composite resin.
- B. The height of the marginal ridge(s) is equal to it's original height and consistent with good occlusion (no excessive contacts or hyperocclusion).
- C. The major developmental grooves are reproduced and are correctly located and shaped.
- D. The triangular ridges are restored to original contour (not over or under contoured).
- E. The fossae have been restored to original shape and position.

### Margins

- A. The margins are smooth. There are no pits or voids at the cavosurface margins.
- B. There is no hypermargination of composite resin at the cavosurface margins.
- C. There is no hypomargination of composite resin at the cavosurface margins.

### Contour

- A. The marginal ridge is rounded convexly and definite. Does not have sharp angles when viewed from the facial or occlusal.
- B. The original proximal contours of the tooth have been restored when viewed from the occlusal or facial.

### Contact

- A. The composite resin has observable physical contact with the adjacent tooth when viewed facially, lingually and occlusally.
- B. One thickness of unwaxed floss will not easily pass through the contact area.
- C. The interproximal contact area is completely in the facial 1/2 of the tooth.
- D. The interproximal contact area is completely in the occlusal 1/3 of the tooth.
- E. The occlusal limit or the interproximal contact area is on closer than 0.5 mm from the crest of the marginal ridge.

### Shade and Finish

- A. The surface of the composite is smooth, polished, and free of scratches, gouges or other irregularities.
- B. The shade of the restoration is compatible with the adjacent tooth structure.
- C. The restored tooth is free of any debris and the dentoform is well kept.

**ULSD** Adequate isolation with a rubber dam. Generally, size and location of the lesion are no longer considered restrictions except rarely placed in third molars due to isolation problems and access.

**MMC** No response submitted

**UNC** DEPARTMENT OF OPERATIVE DENTISTRY POLICY STATEMENT ON CLASS II POSTERIOR COMPOSITES

#### Indications:

- Esthetic considerations
- Small lesion allowing conservative preparation
- Mercury sensitivity (exceedingly rare)
- Provisional cusp replacement or cusp support

#### Contraindications:

- Unable to isolate well
- Gingival margin apical to the CEJ
- Poor oral hygiene and/or high caries rate
- Occlusion only on composite, not on adjacent tooth structure

**NOVA** No response submitted

**UPR** No response submitted

- MUSC** a) Rarely, if ever, on a second molar  
b) Molars and 2nd Bi  
i) Minimal occlusal contact on composite  
ii) Esthetics must be an issue  
iii) We do get patients who are afraid of Hg; they get composite but also get a longevity statement added to their record that they have to agree to.  
iv) PRR, no limits  
c) 1st Bi - most of these are now done in composite if they involve the mesial half of the tooth.  
d) No class II composite will be placed on a tooth that cannot be isolated with rubber dam.

**VCU** From *Sturdevant's Art and Science of Operative Dentistry, 6th Edition. pp. 254-255, 265-266:*

“The American Dental Association (ADA) indicates the appropriateness of composites for use as pit and-fissure sealants, preventive resin restorations, and Class I and II restorations for initial and moderate-sized lesions, using modified conservative tooth preparations. The ADA further states that composites can be comparable to that of amalgam in Class I, Class II, and Class V restorations.” The longevity of posterior composites, however, is directly related to factors such as the size of the restoration, the patient's caries risk, and operator technique.

**Indications:** Class I, II, and VI direct composite restorations are indicated for the restoration of primary caries lesions in the occlusal (Class I and VI) and proximal (Class II) surfaces of posterior teeth. When used in posterior teeth, direct composite will perform best in small- and moderate-sized restorations, preferably with enamel margins. Because composites are tooth-colored, these restorations are particularly indicated when esthetics is considered to be of primary importance. They also are indicated occasionally as large restorations that may serve as foundations for crowns. Additionally, in selected cases, large composite restorations may be used where an interim restoration is indicated or where economics or other factors preclude a more definitive restoration such as a crown.

**Contraindications:** The main contraindication for use of composite for Class I, II, and VI restorations is an operating area that cannot be adequately isolated. Class I and II composites also may be contraindicated for large restorations when heavy occlusal stresses are present. In restorations in which the proximal box extends onto the root surface, posterior composites should only be used if absolutely required because of the difficulty in predictably bonding to the gingival wall absent an enamel margin. Extended (deep) gingival margins also can be more difficult to light-activate owing to their location. Whenever a defect extends onto the root surface, negative effects for the restoration may occur, no matter what restorative material is being used. Any extension onto the root surface requires the best and most meticulous efforts of the operator to ensure a successful, long-lasting restoration.



**Initial Clinical Procedures:** The same general procedures as described previously are necessary before beginning a Class II composite restoration. Several aspects of those activities, however, need emphasis. First, an assessment of the expected tooth preparation extensions (outline form) should be made and a decision rendered on whether or not an enamel periphery will exist on the tooth preparation, especially at the gingival margin. The expected presence of an enamel periphery strengthens the choice of composite as the restorative material because of the most predictable bonding to that substrate. If the preparation is expected to extend onto the root surface, potential problems with isolation of the operating area, adequate adhesion to the root dentin, and adequate composite polymerization exist. Good technique, proper use of the material, and use of a glass ionomer material on the root surface portion may reduce these potential problems. Second, the pre-operative occlusal relationship of the tooth to be restored must be assessed. The presence of heavy occlusal contacts may indicate that wear may be more of a consideration. Also, preoperative wedging in the gingival embrasure of the proximal surfaces to be restored should occur. Placing wedges, bitine rings, or both before tooth preparation begins the separation of teeth, which may be beneficial in the re-establishment of the proximal contact with the composite restoration.

2. What source material are you using to develop the criteria?

- UAB** No response submitted
- UFL** They have been developed with the operative division's philosophy of minimally invasive dentistry in mind; therefore no specific source of information was used.
- ECU** No response submitted
- GRU** Many lab studies support the above; most clinical trials are done under these condition.
- UKY**
- ULSD** Sturdevant's text. It notes that the "main contraindication for the use of composite for Class I, II, and VI restorations is an operating area that cannot be adequately isolated."
- MMC** No response submitted
- UNC** Sturdevant's Art & Science of Operative Dentistry, 6th Edition
- NOVA** No response submitted
- UPR** No response submitted
- MUSC** Fundamentals of Operative Dentistry, Summitt, Robbins, Hilton, Schwartz; Quintessence Publishing, third edition, 2006  
Longevity of posterior tooth dental Restorations, GORDON J. CHRISTENSEN, D.D.S., M.S.D., Ph.D., JADA, Vol. 136, February 2005  
Amalgam VS. Composite Resin: 1998, Gordon J. Christensen, J Amer Dent Assoc 1998;. 129:1757-9  
In Vivo and In Vitro Evaluations of Microleakage Around Class I Amalgam and Composite Restorations  
T. Alptekin, F. Ozer\*, N. Unlu, N. Cobanoglu, and M. B. Blatz, Oper Dent, Volume 35, Issue 6 (November 2010)  
Amalgam and Composite Posterior Restorations: Curriculum Versus Practice in Operative Dentistry at a US Dental School, M. E. Ottenga and I. A. Mjör (2007), Operative Dentistry: September 2007, Vol. 32, No. 5, pp. 524-528

- MUSC** Clinical Evaluation of Direct Cuspal Coverage with Posterior Composite Resin Restorations, Simone Deliperi, DDS\*, David N. Bardwell, DMD, MS† (J Esthet Restor Dent 18:256–267, 2006)  
Teaching the placement of posterior resin-based composite restorations in U.S. dental schools Christopher D. Lynch, Robert J. McConnell and Nairn H.F. Wilson JADA 2006;137(5):619-625  
Future Use of Materials for Dental Restoration, Report of the meeting convened at WHO HQ, Geneva, Switzerland 16th to 17th November 2009  
 A retrospective clinical study on longevity of posterior composite and amalgam restorations Opdam NJ, Bronkhorst EM, Roeters JM, Loomans BA, Dental Materials - Official Publication of the Academy of Dental Materials [2007, 23(1)-2-8 Department of Cariology and Endodontology, Radboud University Medical Centre Nijmegen, P.O. Box 9101, NL 6500 HB Nymegen, The Netherlands  
**VCU** No response submitted

3. What is the cost per tooth?

- UAB** No response submitted  
**UFL** No response submitted  
**ECU** No response submitted  
**GRU** Around two bucks for solid  
**UKY** No response submitted  
**ULSD** No response submitted  
**MMC** No response submitted  
**UNC** No response submitted  
**NOVA** No response submitted  
**UPR** No response submitted  
**MUSC** No response submitted  
**VCU** No response submitted