Fall 22

Consortium of Operative Dentistry Educators (CODE)

Annual National Report: Regions I - VI

Prepared by:

Gary L. Stafford DMD – National Director

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National Director's Update

Fortunately, 2022 saw the Consortium return to a sense of normalcy following the adjustments that were necessary in AY 2020-21 and in AY 2021-22. For 2022, I was able to attend the Region I Fall Meeting that was held at the UCLA School of Dentistry and as usual, found the conversations to be engaging and enlightening. Each of our regional directors and our hosts went to great lengths to ensure that the attendees at their regional meetings had both an informative and enjoyable time.

- Region I Director, Dr. James Keddington and hosts, Dr. Rueben Kim, Dr. Marc Hayashi, and Dr. Bo Yu at the University of California Los Angeles (UCLA) School of Dentistry. (Hybrid)
- Region II Director, Dr. Christa Hopp and host, Dr. Karine Barizon at the University of Colorado School of Dental Medicine. (In-person)
- Region III Director, Dr. Marila Sly and hosts, Dr. Zachary Dacus and Dr. Troy Schmitz at the University of Oklahoma College of Dentistry. (In-person)
- Region IV Director, Dr. Michelle Kirkup and host, Dr. Tammy Chipps at the West Virginia University School of Dentistry. (Virtual)
- Region V Director and host, Dr. Golda Erdfarb, at the Touro College of Dental Medicine. (Hybrid)
- Region VI Director, Dr. Roopwant Kaur, and host, Dr. Mary Baechle at the Virginia Commonwealth University School of Dentistry. (Virtual)

Given that our annual dues remain low at $100 per institution, we are a lean and mean operation, and it is necessary that we function in that regard. Our organization could not operate were it not for the diligent efforts of our six Regional Directors and each of the hosts/host schools for the fall meetings. Their willingness to devote the energy necessary to coordinate the meetings and garner financial support from their parent institutions and corporate sponsors is noteworthy. Their continued efforts help to ensure that the meetings are as memorable as they are productive. I would also like to thank the Deans of each of the host schools for allowing us to visit their respective institutions and for providing us with meeting spaces, refreshments, and permission to tour their facilities. Speaking on behalf of the membership, we thank each of you for your commitment to the Consortium.

On May 12th, 2022, I sent the Annual Dues Statement to the Regional Directors for distribution to each school's representative. As you may recall, due to many schools' financial constraints resulting from COVID-19, annual dues waivers were granted for AY 2020/21. Meeting the stated goal of 100% active membership by U.S. Dental Schools remains a challenge, especially since institutional membership and support of CODE through annual dues payments have declined since 2019. As the Regional Director's understand, collecting our annual dues is one of the most difficult aspects of their

volunteer position and given the relatively small amount of our annual dues, payment can be easily overlooked by an institution's administration. Therefore, it is necessary for each member school to have a CODE Representative that will provide the appropriate follow-up and ensure that the payments are made to CODE in a timely fashion. The significant decline in dues paying member schools in 2020 can certainly be attributed to COVID-19 but we remain well below pre-COVID levels of dues paying membership but our goal remains to have 100% participation by the dental schools in the United States. While I am proud of the level of institutional participation, I would ask each CODE Representative that if your school is listed as one of those not being an active member (see the Schools and Regions section of the 2022 Annual National Report), please help facilitate payment by following up with the individual who is responsible for sending in the annual dues. Please contact me directly at staffoga@ohsu.edu with any questions you might have or assistance you might require.

As the tables below demonstrate, CODE has not recovered to pre-COVID levels of dues paying membership rates.

Table 1: AY 2022-23 Annual Dues

Region	AY 2022-23 US Schools	AY 2022-23 Canadian Schools
I – Pacific	12/14 = 86%	2/2 = 100%
II – Midwest	7/9 = 78%	0/2 = 0%
III – South Midwest	5/7 = 71%	N/A
IV – Great Lakes	4/10 = 40%	1/1 = 100%
V – Northeast	9/14 = 64%	1/5 = 20%
VI – South	9/13 = 69%	N/A

National Totals:	**46/67 = 69%**	**4/10 = 40%**

Table 2: Dues during COVID-19 – AY 2020-21 and AY 2021-22

Region	2021 US Schools	2021 Canadian Schools	2020 US Schools	2020 Canadian Schools
I – Pacific	13/14 = 93%	1/2 = 50%	4/13 = 31%	0/2 = 0%
II – Midwest	9/9 = 100%	0/2 = 0%	5/9 = 56%	1/2 = 50%
III – South Midwest	4/7 = 57%	N/A	0/7 = 0%	N/A
IV – Great Lakes	3/10 = 0%	1/1 = 100%	3/10 = 30%	0/1 = 100%
V – Northeast	12/14 = 86%	1/5 = 20%	9/14 = 64%	0/5 = 0%
VI – South	10/13 = 77%	N/A	7/13 = 54%	N/A
National Totals:	**51/67 = 76%**	**3/10 = 30%**	**28/66 = 42%**	**1/10 = 10%**

Table 3: Dues prior to COVID-19

Region	2019 US Schools	2019 Canadian Schools	2018 US Schools	2018 Canadian Schools	2017 US Schools	2017 Canadian Schools

I – Pacific	13/13 = 100%	2/2 = 100%	13/13 = 100%	2/2 = 100%	13/13 = 100%	2/2 = 100%
II – Midwest	8/9 = 89%	2/2 = 100%	8/9 = 89%	1/2 = 50%	8/9 = 89%	2/2 = 100%
III – South Midwest	6/7 = 86%	N/A	7/7 = 100%	N/A	7/7 = 100%	N/A
IV – Great Lakes	9/10 = 90%	1/1 = 100%	9/10 = 90%	1/1 = 100%	8/10 = 80%	1/1 = 100%
V – Northeast	13/14 = 93%	1/5 = 20%	11/14 = 79%	2/5 = 40%	13/14 = 93%	3/5 = 60%
VI – South	9/13 = 69%	N/A	12/13 = 92%	N/A	11/13 = 85%	N/A
National Totals:	**58/66 = 88%**	**6/10 = 60%**	**60/66 = 91%**	**6/10 = 60%**	**60/66 = 91%**	**8/10 = 80%**

The organization has many dedicated participants and CODE could not effectively function without the work of the Advisory Committee and our Regional Directors. During 2022, several changes have taken place within our ranks. Specifically:

- Region VI – Dr. Roopwant Kaur is being replaced by Dr. Martha Brackett as the Regional Director.

Per CODE's Organizational Operation, we have three at-large members who serve on the CODE Advisory Committee and while their three-year terms are renewable, they are not to exceed two consecutive terms. All three of our at-large member's terms expired in 2022:

- William W. Johnson DDS, MS – University of Nebraska Medical Center College of Dentistry
- Edmund R. Hewlett DDS – University of California, Los Angeles School of Dentistry
- Kevin B. Frazier DMD, EdS – The Dental College of Georgia at Augusta

Three new Advisory Committee members have agreed to serve and will be nominated during the 2023 ADEA Section on Operative Dentistry and Biomaterials meeting:

- Rose McPharlin DDS – University of Nevada, Las Vegas School of Dental Medicine
- Roopwant Kaur BDS, MS – East Carolina University School of Dental Medicine
- Oanh Le DDS – University of California, San Francisco School of Dentistry

Dr. William Johnson has served CODE as the webmaster for a considerable length of time and has retired from his academic life. Given that he is no longer able to monitor the CODE website, a new one has been created and can be found at www.operativedentistryeducators.com. My hope is that the new site will better enable us to communicate, find documents, and serve as another mechanism by which to pay your institutions annual dues. I hope that you will find it beneficial.

Lastly, Dr. Golda Erdfarb has agreed to deliver a presentation on "*3D Printing of Teeth for Teaching Dental Anatomy and Operative Dentistry"* at the 2023 CODE Annual National Meeting that will be held at 5:30 pm in the Parkside Room of the Drake Hotel in Chicago, IL on Thursday, February 23rd, 2023. Dr. Erdfarb is an Associate Professor, the Course Director for Operative Dentistry and Dental Anatomy & Occlusion at Touro College of Dental Medicine, and will be representing Region V. The Academy of Operative Dentistry continues to graciously provide support for this annual event so I would hope that many of you would be able to join us during the AOD's Annual Meeting. I will look forward to seeing you there. Until then, you have…

All my best,

Gary L. Stafford DMD
National Director – Consortium of Operative Dentistry Educators (CODE)

Origins of CODE

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 that 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 complied 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.

Establishment of Board of Directors and Articles of Incorporation

In 2013, Dr. Larry Haisch stepped down as National Director. The organization flourished under Larry's outstanding leadership and 15-year tenure as National Director. Bank accounts needed to be transferred to the new National Director's locale and name. In a post 9-11 society, bank accounts are not as easy to establish for non-profit organizations as they once were. The organization was compelled to establish a Board of Directors and write Articles of Incorporation in order to conduct regular organizational business. The Board of Directors consists of all Regional Directors as well as the At-Large Directors.

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.

This section was written by Larry D. Haisch, DDS – CODE National Director 1998 – 2012

Past and Current National Directors (Coordinators)

1974 - 1982	Robert B. Walcott DDS	University of California Los Angeles
1982 - 1986	Thomas A. Garmen DDS MS	University of Georgia
1986 - 1989	Frank J. Miranda DDS	University of Oklahoma
1989 - 1998	Marc A. Gale DMD M Ed	University of Florida
1998 - 2012	Larry D. Haisch DDS	University of Nebraska
2013 - 2015	Edward J. DeSchepper MA Ed DDS MSD	University of Tennessee
2016 - Present	Gary L. Stafford DMD	Oregon Health & Science University

Organizational Operation

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

- The Executive Council of the Operative and Biomaterials Section will appoint the National Director of CODE 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 (and now also Board of Directors) 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 region will select their Regional Director. The National Director and/or the Executive Council may select the at-large member(s).
- 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 regionsA 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

Advisory Committee

(Board of Directors)

Updated 12.31.22

	Region	Regional Directors	Phone/email	3 Year Term
I	Pacific	James Keddington DDS Associate Professor Section Head – Dental Conservation and Restoration Assistant Dean for Curriculum Innovation University of Utah School of Dentistry 530 S Wakara Way Salt Lake City, UT 84108	O: 801.581.8951 C: 385.439.7774 James.Keddington@hsc.utah.edu	2021 - 2024
II	Midwest	Christa Hopp DMD Associate Professor Restorative Department Southern Illinois University School of Dental Medicine 2800 College Ave. Alton, IL 62002	O: 618.474.7052 chopp@siue.edu	2021 - 2024
III	South Midwest	Marilia M. Sly DDS, MSD Associate Professor Department of Restorative Dentistry and Prosthodontics University of Texas Health Science Center at Houston, School of Dentistry SOD-5442 Houston, TX 77030	O: 713.486.4362 Marilia.M.Sly@uth.tmc.edu	2022 - 2025
IV	Great Lakes	Michele L. Kirkup DDS Clinical Assistant Professor Department of Restorative Dentistry Indiana University College of Dentistry 1121 West Michigan St. Indianapolis, IN 46202	O: 317.278.3398 mkirkup@iu.edu	2020 - 2023
V	Northeast	Golda Erdfarb DDS Associate Professor Touro College of Dental Medicine 19 Skyline Dr. Hawthorne, NY 10532	O: 914.594.2637 C: 201.575.2166 golda.erdfarb@touro.edu	2022 - 2025
VI	South	Martha Brackett DDS, MSD Professor The Dental College of Georgia at Augusta 1120 15th St Augusta, GA 30912	O: 706.721.7308 mbrackett@augusta.edu	2023 - 2026
		At-Large Members	Phone/email	3 Year Term
II	At-Large	Rosemary McPharlin DDS Chair and Professor-in-Residence of Clinical Sciences Department of Dental Medicine University of Nevada, Las Vegas School of Dental Medicine 4505 S Maryland Pkwy Las Vegas, NV 89154	O: 702.774.2711 rosemary.mcpharlin@unlv.edu	2023 - 2026
III	At-Large	Roopwant Kaur BDS, MS Clinical Associate Professor Division of Operative Dentistry East Carolina University School of Dental Medicine 1851 MacGregor Downs Rd Greenville, NC 27834-4354	O: 252.737.7148 kaurr@ecu.edu	2023 - 2026

		At-Large Members	Phone/email	3 Year Term
VI	At-Large	Oanh Le DDS Professor Preventive & Restorative Dental Sciences University of California San Francisco School of Dentistry 707 Parnassus Ave San Francisco, CA 94143	O: 415.476.0860 oahn.le@ucsf.edu	2023 - 2026
II	Web Master	TBD	TBD	No Term
II	National Director	Gary L. Stafford DMD Professor, Oral Rehabilitation & Biosciences Senior Associate Dean for Academic Systems Oregon Health & Science University School of Dentistry MC: SD-AA 2800 S Moody Ave Portland, OR 97201	O: 503.494.8801 C: 708.261.1039 staffoga@ohsu.edu	2022-2025

Regions and Schools

North American Dental Schools = 77 (10 Canada* and 67 United States)

Region I (Pacific) – 16 Dental Schools (2 Canada* and 14 United States)

Region	Dental School	2022/23 Member
I	University of Alberta*	✓
I	University of British Columbia*	✓
I	AT Still University of Health Sciences - Arizona	✓
I	Midwestern University - Arizona	✓
I	Loma Linda University	
I	Roseman University of Health Sciences	✓
I	University of Nevada at Las Vegas	✓
I	University of Southern California	✓
I	University of California at Los Angeles	✓
I	University of California at San Francisco	
I	University of the Pacific	✓
I	Oregon Health & Sciences University	✓
I	University of Utah	✓
I	California Northstate University	✓
I	University of Washington	✓
I	Western University of Health Sciences	✓

Region II (Midwest) – 11 Dental Schools (2 Canada* and 9 United States)

Region	Dental School	2022/23 Member
II	University of Manitoba*	
II	University of Saskatchewan*	
II	Missouri School of Dentistry & Oral Health	
II	University of Colorado Health Sciences Center	✓
II	The University of Iowa	✓
II	Southern Illinois University	
II	University of Minnesota	✓
II	University of Missouri at Kansas City	✓
II	University of Nebraska Medical Center	✓
II	Creighton University	✓
II	Marquette University	✓

Region III (South Midwest) – 7 Dental Schools (7 United States)

Region	Dental School	2022/23 Member
III	Louisiana State University Health Sciences Center	✓
III	University of Mississippi Medical Center	✓
III	Oklahoma University Health Sciences Center	✓
III	University of Tennessee	✓
III	Texas A & M Health Science Center College of Dentistry	
III	University of Texas Health Sciences Center at Houston	✓
III	University of Texas Health Sciences Center at San Antonio	

Region IV (Great Lakes) – 11 Dental Schools (1 Canada* and 10 United States)

Region	Dental School	2022/23 Member
IV	The University of Western Ontario*	✓
IV	Midwestern University - Illinois	
IV	The University of Illinois – Chicago	✓
IV	Indiana University School of Dentistry	✓
IV	University of Detroit Mercy	
IV	University of Michigan	✓
IV	University of Buffalo	
IV	Case Western University	
IV	The Ohio State University	
IV	University of Pittsburgh	
IV	West Virginia University	✓

Region V (Northeast) – 19 Dental Schools (5 Canada* and 14 United States)

Region	Dental School	2022/23 Member
V	Dalhousie University*	✓
V	McGill University*	
V	University of Toronto*	
V	Laval University*	
V	University of Montreal*	
V	University of Connecticut Health Center	✓
V	Howard University	✓
V	Boston University	
V	Harvard University	

V	Tufts University	✓
V	University of Maryland	✓
V	University of New England	✓
V	Rutgers University	✓
V	New York University	✓
V	Stony Brook University	✓
V	Columbia University	✓
V	Temple University	
V	Touro College of Dental Medicine	
V	University of Pennsylvania	

Region VI (South) – 13 Dental Schools (13 United States)

Region	Dental School	2022/23 Member
VI	University of Alabama	
VI	East Carolina University	✓
VI	Lake Erie College of Osteopathic Medicine	
VI	Nova Southeastern University	✓
VI	University of Florida	
VI	The Dental College of Georgia at Augusta University	✓
VI	University of Kentucky	✓
VI	University of Louisville	✓
VI	University of North Carolina	✓
VI	University of Puerto Rico	
VI	Medical University of South Carolina	✓
VI	Meharry Medical College	✓
VI	Virginia Commonwealth University	✓

2022 Regional Meeting Hosts

Region/Dates	University/Address	Host Name/Phone/email
I – September 29-30, 2022	(Hybrid) UCLA School of Dentistry Center for Health Sciences 10833 Le Conte Ave Los Angeles, CA 90095-1668	Reuben Kim rkim@dentistry.ucla.edu Marc Hayashi mhayashi@dentistry.ucla.edu Bo Yu 0: 310.825.8026 boyu@dentistry.ucla.edu
II – September 15-16, 2022	University of Colorado School of Dental Medicine 13065 E 17th Ave Aurora, CO 80045	Karine Barizon 0: 303.724.5982 Karine.Barizon@cuanschutz.edu
III – November 9-11, 2022	The University of Oklahoma College of Dentistry 1201 N Stonewell Ave Oklahoma City, OK 73117	Zachary Dacus zachary-dacus@ouhsc.edu Troy Schmitz troy-schmitz@ouhsc.edu
IV – October 6-7, 2022	(Virtual) Indiana University School of Dentistry 1121 W. Michigan Street Indianapolis, IN 46202	Michele Kirkup 0: 317.274.5576 mkirkup@iu.edu
V – October 19-20, 2022	Touro College of Dental Medicine at New York Medical College 19 Skyline Dr Hawthorne, NY 10532	Golda Erdfarb O: 914.594.2637 C: 201.575.2166 golda.erdfarb@touro.edu
VI – September 21-23, 2022	Virginia Commonwealth University School of Dentistry Lyons Dental Building 520 N 12th St, 4th Floor PO Box 980566 Richmond, VA 23298-0566	Mary Baechle O: 804.828.2977 mbaechle@vcu.edu

2023 Regional Meeting Hosts

Region/Dates	University/Address	Host Name/Phone/email
I – TBD, 2023	University of British Columbia Faculty of Dentistry 2329 West Mall Vancouver, BC Canada V6T 1Z1	Adriana Manso DDS, MSc, PhD 0: 604-822-0383 amanso@dentistry.ubc.ca
II – TBD, 2023	TBD	TBD
III – TBD, 2023	The University of Tennessee Health Science Center College of Dentistry 875 Union Ave Memphis, TN 38163	William Callahan DDS wcallaha@uthsc.edu Jeffrey Scott Nordin DDS, MS jnordin@uthsc.edu
IV – TBD, 2023	West Virginia University School of Dentistry 64 Medical Center Dr PO Box 9600 Morgantown, WV 26506-9600	Tammy Chipps DDS O: 304.293.1245 tchipps@hsc.wvu.edu
V – September 18-19, 2023	Touro College of Dental Medicine at New York Medical College 19 Skyline Dr Hawthorne, NY 10532	Golda Erdfarb DDS O: 914.594.2637 C: 201.575.2166 golda.erdfarb@touro.edu
VI – TBD, 2023	James B. Edwards College of Dental Medicine Medical University of South Carolina 173 Ashley Ave, BSB 548, MSC 507 Charleston, SC 29425	John C. Comisi, DDS O: 843-792-2912 comisi@musc.edu

Regional Meeting Reporting/National Meeting Information

The 2022 National Agenda was established after a review of the suggestions contained in the reports of the 2021 Fall Regional meetings, National CODE Meeting, and from the Regional CODE Directors. Previous National agendas were reviewed to avoid topic duplication. Inclusion of a previous topic may occur for discussion from the aspect as to what has changed, and the response/action taken and/or 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 a Regional Meeting is requested to bring their responses to the National Agenda in written form AND electronic media. This information is vital to timely publication of the National Annual Report.

Continue to invite your colleagues, Dental Licensure Board examiners, and your Military and Public Health Service colleagues who head/instruct dental education programs to your regional meetings. The strength of the organization lies in its membership.

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

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

The required format and sequence will be:

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

***(copies may be obtained from the CODE website: www.unmc.edu/code or within this document)

Send an electronic copy of the final regional report via an email attachment to the National Director (staffoga@ohsu.edu) within thirty (30) days of the meetings conclusion.

2023 Annual National CODE Meeting:
The meeting will be held Thursday, February 23rd, 2022, from 5:30 – 6:30 pm in the Parkside Room at the Drake Hotel, 140 East Walton Place, in Chicago, IL.

2023 ADEA Section on Operative Dentistry and Biomaterials Forum:

The meeting will be held on Monday, March 13th at 7:00 am during the ADEA Annual Session & Exhibition, March 10-14, 2023, in Portland, OR.

National Directory of Operative Dentistry Educators:
The CODE National Director maintains the National Directory of Operative Dentistry Educators as a resource for other dental professionals. It is critically important that this information be as current as possible.

You may update your university's directory listing on the CODE website at www.operativedentistryeducators.com or by sending an email directly to the National Director at staffoga@ohsu.edu.

In an effort to keep the National Directory up to date, please have each school in your Region update the following information:

1. *School name and complete mailing address*
2. *Individual names: (F/T Faculty), phone number and email address of F/T Faculty who teaches operative dentistry.*
    a. This could be individuals who teach in a comprehensive care program, etc… if there is no defined operative section of the department.

Your help and cooperation in accomplishing the above tasks helps save time and effort in maintaining a complete National Directory and publishing the Annual National Report in a timely fashion.

All my best,

Gary L. Stafford DMD
Consortium of Operative Dentistry Educators (CODE)
National Director
Professor, Restorative Dentistry
Senior Associate Dean for Academic Systems
Oregon Health & Science University
School of Dentistry
MC: SD-AA
2800 S Moody Ave
Portland, OR 97201
503.494.8801
staffoga@ohsu.edu

2022 National Agenda

I. Curriculum

a. Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?
b. Are your students requesting more videos of procedures post-COVID?
    i. Do your students access YouTube and similar platforms in lieu of course content?
c. Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?
d. How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?
e. What percentage of your curriculum, if any, is devoted to amalgam instruction?

II. Materials and Techniques

a. Zirconia restorations (preparation guidelines, preclinical and clinical use)
b. Do you teach bulk fill technique?
    i. If so, what products do you use?
c. Do you teach the Bioclear method?
    i. If yes, is it part of the curriculum or main track operative?
d. Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.
e. How do you teach post and core?
    i. Human teeth or simulated, (i.e. Accidental or Frasaco)?
f. Are you doing more traditional impressions than scans?
g. Are you clinically scanning and milling on the same day?
    i. Do you have a dedicated faculty/digital technician?
h. Do you teach margin elevation?
    i. If so, What material do you use?
i. In your school are micro-etchers introduced?
    i. If Yes - for which procedures?
j. In your school are the pre-clin students introduced to working on natural teeth?
    i. If yes - for which procedures? How are the natural teeth “sterilized” prior to usage?
k. Which generation bonding agents are you using?
l. What is your success rate with composite restorations at your institution?
m. How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?
n. Does your school have a separate clinical discipline managing the non-operative treatment phase?

III. Student Assessment

a. How to address students with anxiety and overcoming failures
b. How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?
c. How many Mock Board sessions are you performing?
d. Is your state/region permitting or considering the DLOSCE for licensure?
e. For regional licensure exams, are you opting for live or simulated examinations?
    i. Do you use prefabricated carious teeth for simulated exams?

IV. <u>Administration</u>

a. How do you recruit adjunct faculty?
b. How do you calibrate/align faculty?
c. How do you monitor and manage student learner requests for excused absences related to COVID-19?
    i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)
    ii. How do you manage these missed assessments?
d. What opportunities does your institution provide to help develop junior operative faculty?
    i. What academic/administrative career trajectories do operative trained faculty typically pursue?

2023 Regional Meeting Report Form

Region:

Host University, Address, and Dates of 2023 Regional Meeting:

Host University	Address	Dates of Meeting

Chairperson and Contact Information for 2023 Regional Meeting:

Chairperson	University/Address	Phone/email

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

Contact Person, Host University, and Dates of 2024 Regional Meeting:

Contact Name Phone/email	Host University/Address	Dates of Meeting

Suggested Agenda Items for 2024:

2023 Regional Meeting Attendee's Form

Name	University	Phone	email

2023 Regional Meeting Attendee's Form

Name	University	Phone	email

Please return all completed enclosures to:

Gary L. Stafford DMD
Consortium of Operative Dentistry Educators (CODE)
National Director

Professor, Oral Rehabilitation & Biosciences
Senior Associate Dean for Academic Systems
Oregon Health & Science University
School of Dentistry
MC: SD-AA
2800 SW Moody Ave
Portland, OR 97201

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staffoga@ohsu.edu

Deadline for return: 30 days post-meeting

Please send the requested documents via email with attachments

Region I

Participating Schools

A.T. Still
California Northstate University
Loma Linda University
Midwestern University
Oregon Health and Science University
University of Alberta
University of British Columbia
UCLA
UNLV
University of Utah
University of the Pacific
USC
University of Washington
Western University

Absent this year

UCSF
Roseman University

2022 National Agenda

I. Curriculum-A.T. STILL University

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

We are back into full capacity in the sim-clinic and classroom.

Are your students requesting more videos of procedures post-COVID?

Students generally requesting more videos. Luckily there a lot of them on U Tube

i. Do your students access YouTube and similar platforms in lieu of course content?

Some faculty refer to You Tube videos. We always hear from Students about certain way on doing a procedure that the watched in You-Tube

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?

No

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

For the pre-clinical modules D1 & D2 year we offer 450 hours which includes didactic and sim-clinic projects. There are around 20- hours didactic reviews offered in the D3 & D4 year

What percentage of your curriculum, if any, is devoted to amalgam instruction?

Around 80-85 hours

Curriculum-California Northstate University

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? Hard to answer since we started in Jan 2022.

Are your students requesting more videos of procedures post-COVID? Yes

ii. Do your students access YouTube and similar platforms in lieu of course content? They are instructed not to and instructed to watch the prepared videos for class.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? No.

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? 6-8 hours a week for the D1 year.

What percentage of your curriculum, if any, is devoted to amalgam instruction? None we are focusing on composite techniques.

Curriculum- Loma Linda University

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

Yes, from 2 sessions 4hrs each to 3 sessions 3hrs each

Are your students requesting more videos of procedures post-COVID?

Yes, they do

i. Do your students access YouTube and similar platforms in lieu of course content?

Yes, the recommended YouTube videos

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?

No, Teledentistry didn't affect the time devoted to operative instruction

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

The total hours allocated for operative dentistry is 350hrs per academic year

What percentage of your curriculum, if any, is devoted to amalgam instruction?

The percentage that is devoted for Amalgam is 25%

Curriculum-Midwestern University

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

No

Are your students requesting more videos of procedures post-COVID?

Yes

i. Do your students access YouTube and similar platforms in lieu of course content?

They access YouTube in addition to the course content, same as before COVID

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?

No

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

Over 40 hours of lecture, about 115 hours in preclinic, and clinic is 4 and a half days a week for 44 weeks

What percentage of your curriculum, if any, is devoted to amalgam instruction?

1-2% (4 lectures, 4 hours hands on)

Curriculum-Oregon Health and Science University

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

Once our University exited modified operations our schedule and curriculum returned to pre-COVID routines.

Are your students requesting more videos of procedures post-COVID?

We have more recorded videos now and students have access to them. Students were requesting more videos even prior to COVID. It seems that they are now asking for live demonstrations.

i. Do your students access YouTube and similar platforms in lieu of course content?

I have not concrete data to support this, but my suspicion is yes. Students tell me that they access YouTube and Instagram for dental videos. ADEA has some studies that support this is other schools. I would like to do some research on this topic at OHSU.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?

Not in the preclinic. Urgent Care is the only department we currently teach Telehealth.

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

In our preclinical curriculum we have six courses focused on operative dentistry totally 11 credit hours. We have an additional five courses that focus on indirect restorations including CAD CAM which total 10 credit hours.

What percentage of your curriculum, if any, is devoted to amalgam instruction?

I would estimate 1/4 of the 11 credit hours in operative dentistry are devoted to amalgam instruction.

Curriculum-University of Alberta

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

Yes. Ongoing COVID screenings via fit for work screening questionnaire (one per session/multiple submissions per day) for staff/ faculty/students/patients.
Hybrid model: in-person clinics/sim lab. Combination of in person lectures/ online/ recorded lectures.
Fall term 2022: largely in person lectures. Clinics/ simlab in person.

Are your students requesting more videos of procedures post-COVID?

i. Do your students access YouTube and similar platforms in lieu of course content?
No. In addition to but not in lieu. Operative pre-clinical manuals (one per course) summarize all didactic and technical content.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? NA

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

DDS 1: 3 pre-clinical courses and one refresher
Total hours: 186h

What percentage of your curriculum, if any, is devoted to amalgam instruction?

25%

Curriculum-University of British Columbia

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? In Restorative Dentistry modules, most of the changes were incorporated into the curriculum and schedule

Are your students requesting more videos of procedures post-COVID? Yes

i. Do your students access YouTube and similar platforms in lieu of course content? We have been producing a significant number of videos, in particular for the early years (1 and 2). Sometimes, YouTube material is also added (in an internal peer-reviewed system) to enhance their learning and understanding of a particular topic that is currently not available from our own resources

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? No

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? In simulation clinics, current teaching associated to direct restoration represents 80% DMD1, 35% DMD2, and 20% DMD3

What percentage of your curriculum, if any, is devoted to amalgam instruction? Until last year, we were balanced with 50:50 approximately. This year we are reviewing the contents and developing several new lectures to increase student's exposure to resin composites compared to amalgam. We are looking at a change in the range of 40:60 to 35:65, for amalgam:composites ratio

Curriculum-UCLA School of Dentistry

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? Some were. Hybrid teaching models (pre-recorded lectures) were continued in some fashion. Clinic hours and operation have gone back to normal.

Are your students requesting more videos of procedures post-COVID? Not anymore than normal

iii. Do your students access YouTube and similar platforms in lieu of course content? Yes, frequently.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? No

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? Approx 550 hours (not including cariology, waxing, or clinic)

What percentage of your curriculum, if any, is devoted to amalgam instruction? 10-20%

Curriculum-UNLV School of Dentistry

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? Changes adopted due to COVID-19 included teaching online or reducing the clinic availability. For the most part, UNLV has returned to in-person learning and the clinic schedule is made as a function of available faculty. With COVID and other events, there was a deep reduction of faculty and this affected the clinic schedule more than any COVID related response.

Are your students requesting more videos of procedures post-COVID? Students fulfill their desire for videos by utilizing YouTube which is not necessarily

recommended/endorsed by faculty. Students in the simulation clinic do prefer videos as demonstrations just in time to follow when performing in class projects.

i. Do your students access YouTube and similar platforms in lieu of course content? Yes they do and course directors remind students that the evaluations are based on what is offered in class or referenced from the text. YouTube is not the acknowledged reference.

ii.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? Operative dentistry instruction is being delivered pretty much the same way it was delivered pre-Covid. We still have lecture/lab components.

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? Operative Dentistry is a continuum across 3 fourteen-week terms in the first year. It consists of 14 fifty minute lectures and 14 corresponding 3 hour simulation labs. This is 66 hours per term. The first term is bench top projects and the following 2 terms are utilizing the manikins. These are all direct restorations. Not included in the Operative series but in a separate course are the indirect restorations (multiple surface indirect restorations).

What percentage of your curriculum, if any, is devoted to amalgam instruction? UNLV still teaches amalgam and the preclinical operative is about 33% devoted to amalgam. Additionally, in the biomaterials course, the students are taught about amalgam 20%-- the students receive lectures and will have a simulation project.

Curriculum- University of Utah School of Dentistry

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

Asynchronous learning has continued for many simulation courses. We have found that the entire 4 hours dedicated to lab time has increased student skills and confidence. The U has also spent significant time reviewing each course load and distribution and made every effort to organize the curriculum in a way that students learn best.

Are your students requesting more videos of procedures post-COVID? Yes, students seem to like the ability to rewatch the lectures whether they are live(recorded) or

asynchronous. Due to COVID related absences we have been accommodating to this so those that do not feel well don't feel pressure to show up to class

i. Do your students access YouTube and similar platforms in lieu of course content? Yes, maybe not in lieu of, but with some students, certainly it is in addition to. Most students are stressed and doing their best just to get through the mountain of material that we throw their way, let alone have the time to go searching. But, with some, especially if they have a particular interest, yes they will surf the net for answers.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? No. We have asynchronous learning that allows us to lecture without cutting into lab time. We then take a few minutes before each lab for questions or smaller presentations.

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? Operative is broken up into 3 semesters with 4 hours/week of lab time. We have maintained asynchronous lectures to maximize lab time and have seen great results

What percentage of your curriculum, if any, is devoted to amalgam instruction? The entire first semester of Operative I is dedicated to amalgam preps and restorations. We cover Class I and Class II amalgam restorations. In Operative III we cover more extensive amalgam restorations and give the students the option of what material they feel is best for the patient presented. This may be Amalgam, composite or GI

Curriculum- University of the Pacific

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? No. However, some lectures and seminars that were prepared and were successful and had good feedback from students are still used.

Are your students requesting more videos of procedures post-COVID?
Yes, they want to see more videos and we are preparing more.

i. Do your students access YouTube and similar platforms in lieu of course content? They probably unofficially do.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? No

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? 240 Hours

What percentage of your curriculum, if any, is devoted to amalgam instruction? 10%

Curriculum- USC School of Dentistry

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

Partly. In the clinic, changes were dropped. In the preclinic, smaller groups sizes were maintained

Are your students requesting more videos of procedures post-COVID?

i.Do your students access YouTube and similar platforms in lieu of course content?

Yes, students are requesting more videos, but this occurred already pre-COVID. Videos are posted on LMS (Blackboard), but not on YouTube.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?

No

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

Preclinical: Around 220 hrs during 1st and 2nd year embedded in 3 different modules

Clinic: embedded in "Integrated" clinic modules

What percentage of your curriculum, if any, is devoted to amalgam instruction?

0%

Curriculum- University of Washington School of Dentistry

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? **For the most part at UW, we are back to our normal schedule but we have gained experience with the online lectures that become handy at times.**

Are your students requesting more videos of procedures post-COVID? **Yes, and we have created a good amount of such videos**

i.Do your students access YouTube and similar platforms in lieu of course content? **Yes, we have found that to be generally helpful while at times there may be conflicting information.**

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? **Not at UW**

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? **5 quarters x 13 weeks x 5 = 325 preclinical (1st and 2nd yr), excludes dental materials and prosthodontics, dental anatomy, etc.**

What percentage of your curriculum, if any, is devoted to amalgam instruction?
%10 or less.

Curriculum- College of Dental Medicine at Western University of Health Sciences

Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?
Clinically, the previous 3-sessions a day was dropped back to 2-sessions. The clinic has returned to a relative norm; however, some COVID screening and operational protocols are still in place (patient routing, student runners).
Preclinically, continued to use Zoom has a delivery medium for Large Group Didactic presentations and small group interactions. Zoom is expected an mode delivery option in the future to Faculty, although we are expecting the default delivery to be fully in person in Fall 2022.

Are your students requesting more videos of procedures post-COVID?
Do your students access YouTube and similar platforms in lieu of course content?

1. Yes; however, this was happening before COVID as well. We also have been encouraging students to use the Osmosis platform in a similar way. While these platforms are good adjuncts, the students understand they aren't meant to replace their regular content sessions with the faculty. Osmosis will need further development of content. UOP seems to be the leader in this space.

Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?
No

How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?
Preclinically, roughly 1/3-1/2 of the preclinical sessions, depending on the year and semester. First year, 2 half days are devoted to preclinical; second year, 4 sessions are devoted to preclinical. Each half day is 4 hours long.

What percentage of your curriculum, if any, is devoted to amalgam instruction?

Almost none. More theoretical pre-clinical (1 hour presentation, 2 lab sessions), and almost no amalgam is placed clinically.

II. Materials and Techniques- A.T. Still

Zirconia restorations (preparation guidelines, preclinical and clinical use)

We teach it in the clinic and pre-clinic. I mm finish line, and 1.5 occlusal reduction and 1 mm axial

Do you teach bulk fill technique?

NO

i. If so, what products do you use?

Do you teach the Bioclear method?

NO

ii. If yes, is it part of the curriculum or main track operative?

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.

NO

How do you teach post and core?

iii. We teach it in the clinic on extracted teeth after he endo module

iv. Human teeth or simulated, (i.e. Accidental or Frasaco)?

Extracted teeth

Are you doing more traditional impressions than scans?

50/50

Are you clinically scanning and milling on the same day?

No, the students schedule a second visit to deliver the crown. The students scan and mill Prov on same the day they prep the teeth. `

v. Do you have a dedicated faculty/digital technician?

The director of the prosth department oversee all the digital flow in the clinic. We also have CAD-CAM director who works closely with the CCU directors and prosth faculty to implement CAD-CAM the clinic and we have a digital technician

Do you teach margin elevation?

yes

vi. If so, What material do you use?

In the sim use putty in the clinic putty vacuum form

In your school are micro-etchers introduced?

vii. If Yes - for which procedures?

In your school are the pre-clin students introduced to working on natural teeth?

Yes , few procedures

viii. If yes - for which procedures? How are the natural teeth “sterilized” prior to usage?

Students provide the teeth

Which generation bonding agents are you using?
5th Generation
What is your success rate with composite restorations at your institution?
90%
How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?
We have completion of phase assessment
Does your school have a separate clinical discipline managing the non-operative treatment phase?
NO

Materials and Techniques- California Northstate

Zirconia restorations (preparation guidelines, preclinical and clinical use) This will be discussed with products like Emax.
Do you teach bulk fill technique? yes
i- If so, what products do you use? Filtek 1 Bulk Fill
Do you teach the Bioclear method? Partially
i- If yes, is it part of the curriculum or main track operative? A part of the overall curriculum
Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. No
How do you teach post and core? We have not done it yet but probably on Accadental teeth.
i- Human teeth or simulated, (i.e. Accidental or Frasaco)?
Are you doing more traditional impressions than scans? We will do more scans but still teach the traditional method.
Are you clinically scanning and milling on the same day? Clinical operations are not up yet.
i- Do you have a dedicated faculty/digital technician?
Do you teach margin elevation? Probably not.
i- If so, What material do you use?
In your school are micro-etchers introduced? No
i- If Yes - for which procedures?
In your school are the pre-clin students introduced to working on natural teeth? maybe
If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? It will be for enamel familiarization on teeth that have been sterilized.
Which generation bonding agents are you using? 8th/ Universal
What is your success rate with composite restorations at your institution?
How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?
Does your school have a separate clinical discipline managing the non-operative treatment phase?

Materials and Techniques- Loma Linda University

Zirconia restorations (preparation guidelines, preclinical and clinical use)

We follow the preclinical guidelines

Do you teach bulk fill technique? Yes

i. If so, what products do you use? 3M

Do you teach the Bioclear method? Yes

i. If yes, is it part of the curriculum or main track operative?

We have started this year Bioclear method with our D2 students in Summer Quarter

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus?

Currently, its not part of the curriculum, we are planning to add it in the future

How do you teach post and core?

We teach prefab posts and cast posts (Direct & Indirect Techniques). Its part of the curriculum for the IDP students during summer quarter (first year) and for the D students in their third year.

i. Human teeth or simulated, (i.e. Accidental or Frasaco)? Human teeth

Are you doing more traditional impressions than scans? No , the focus is on scanning

Are you clinically scanning and milling on the same day? Not same day

i. Do you have a dedicated faculty/digital technician? Yes, we start teaching the students in preclinical sessions

Do you teach margin elevation? No, its not part of our protocol

i. If so, What material do you use? N/A

In your school are micro-etchers introduced? They are briefly taught

i.If Yes - for which procedures? It depends on the faculty, we do have it available in the clinic

In your school, are the pre-clin students introduced to working on natural teeth?

Yes ,they are

1. If yes - for which procedures? Prefab post / core build up , Cast - Post

2. How are the natural teeth "sterilized" prior to usage? The teeth would be sterilized in formalin for 2 weeks

Which generation bonding agents are you using? 8th generation

What is your success rate with composite restorations at your institution? It has been a while since we looked at this data from the Clinical Quality Assessment team and current numbers were not available.

How does your institution ensure that Phase I been completed effectively as an

approach for restoration longevity?

Usually we start with disease control - phase I, to be checked by faculty, then start the second phase which is the definitive treatment

Does your school have a separate clinical discipline managing the non-operative

treatment phase? No

Materials and Techniques- Midwestern University

Zirconia restorations (preparation guidelines, preclinical and clinical use)

Occlusal clearance 1.5mm; chamfer 0.5 mm
Preclinical: projects on preps and FPD
Clinical: One of two primary restorative materials used for crowns.

Do you teach bulk fill technique?

No

i- If so, what products do you use?

Do you teach the Bioclear method?

No

i- If yes, is it part of the curriculum or main track operative?

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.

No

How do you teach post and core?

i- Human teeth or simulated, (i.e. Accidental or Frasaco)?

Human teeth after RCT

Are you doing more traditional impressions than scans?

Yes

Are you clinically scanning and milling on the same day?

Most of the times not

i- Do you have a dedicated faculty/digital technician?

Digital technician and Director of Digital Dental Technology Curriculum

Do you teach margin elevation?

i- If so, What material do you use?

Yes, RMGI

In your school are micro-etchers introduced?

No

i- If Yes - for which procedures?

In your school are the pre-clin students introduced to working on natural teeth?

Yes

i- If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?

Caries removal, sealants, class I, endo, post and core and crown.

Chloramine T

Which generation bonding agents are you using?

6th and 7th

What is your success rate with composite restorations at your institution?

Very high. We rarely have bond failure.

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?

Faculty supervision and chart reviews

]Does your school have a separate clinical discipline managing the non-operative treatment phase?

No, we have an integrated curriculum

Materials and Techniques- OHSU

Zirconia restorations (preparation guidelines, preclinical and clinical use)

At least 1 mm occlusal reduction, 1.2 mm for cementing, teach both preclinic and clinic

Do you teach bulk fill technique? Yes

If so, what products do you use? Surefil SDR Flow capped with Z-250

Do you teach the Bioclear method? No

i- If yes, is it part of the curriculum or main track operative?

b. Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. No

c. How do you teach post and core?

i. Human teeth or simulated, (i.e. Accidental or Frasaco)?

Lectures

- Core : Amalgam and composite resin
- Post : Pre-fabricated metal post, Cast post, Fiber post

Hands-on

- Endo-treated typodont teeth (Frasaco).
- #12 post space preparation, cast post fabrication using direct resin pattern and indirect (impression) technique and cementation (lentulo, RMGI), followed by crown prep and provisional.
- #9 pre-fabrciated metal (Stainless steel) post prep, placement (RMGI) and composite resin core build-up, followed by crown prep and provisional.

Are you doing more traditional impressions than scans?

Yes

Are you clinically scanning and milling on the same day?

Yes

i- Do you have a dedicated faculty/digital technician?

Yes

Do you teach margin elevation? No

i- If so, What material do you use?

In your school are micro-etchers introduced? Yes

i- If Yes - for which procedures?

Zirconia bonding, repair of old composite. We have a chair-side micro-etchcher, but not may faculty or students use it.

In your school are the pre-clin students introduced to working on natural teeth? Yes

i- If yes - for which procedures? How are the natural teeth “sterilized” prior to usage?

Sealants, caries excavation, indirect CaOH pulp caps, composite, amalgam, full gold crown prep and provisional, PFM prep and provisional, and all ceramic prep and provisional.

Which generation bonding agents are you using?

We are currently transitioning to total-ethc three step 6th generation
Kuraray Clearfil SE Bond 2

What is your success rate with composite restorations at your institution?

Data is not available.

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?

In the Axium system, students need to get checked the Phase I completion and swiped to move forward to the restorative phase.

Does your school have a separate clinical discipline managing the non-operative treatment phase?

Restorative department is managing the entire treatment phases. Non-operative procedures such as oral pathology, periodontics, endodontics and oral surgery manage their TX phases.

Materials and Techniques- University of Alberta

Zirconia restorations (preparation guidelines, preclinical and clinical use)

Depending on case gold, PFM or zirconia. Majority of restorations are zirconia crowns.

Prep guidelines:

- Occl reduction: 1.5mm
- TOC: 10-20 degree
- Taper axial wall: 5-10
- Axial reduction (depending on tooth contour): 1.0-1.2 mm on Facial, 0.8-1.0 mm on Lingual
- modified shoulder: 0.8mm
- margin location: 0.5mm supragingival
- finish line quality/axial wall quality/ rounded line angles

Do you teach bulk fill technique?

i. If so, what products do you use?

Yes.
- 3M Filtek One Bulk fill. (flowable and composite caps)

Do you teach the Bioclear method?

i- If yes, is it part of the curriculum or main track operative?

Yes. As part of operative simulation labs. This method is used sometimes in the clinic, depending upon the case.

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.

No. Within the 13 hours of training in dental materials there is no time for practical experiences.

How do you teach post and core?

i- Human teeth or simulated, (i.e. Accidental or Frasaco)?

Both, on simulated endo teeth (acadental) and human teeth.

Are you doing more traditional impressions than scans?

Yes. More traditional impressions are being done.

Are you clinically scanning and milling on the same day? Yes. CAD/CAM crowns and onlays.

i- Do you have a dedicated faculty/digital technician? 2 dedicated faculty as well as 1-2 technicians.

Do you teach margin elevation?

i- If so, What material do you use? We are teaching sandwich technique with GIC and margin elevation with flowable composite. Clinically mainly the sandwich technique is used and classic crown lengthening.

In your school are micro-etchers introduced?

i- If Yes - for which procedures? Yes (Danville, microetcher IIA). For repairs (ceramic/composite); immediate dentin sealing prior to cementation of ceramic restoration.

In your school are the pre-clin students introduced to working on natural teeth?

i- If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? Yes.

- Endodontic procedures
- selective caries removal (operative)
- Teeth must be stored in formaldehyde for 7d, then transferred into bleach.

Which generation bonding agents are you using? 8th generation. All bond universal BISCO.

What is your success rate with composite restorations at your institution?

I don't have a number. Sorry.

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? Code has to be completed in chart prior to moving onto phase III. Not everyone is authorized to sign this code.

Does your school have a separate clinical discipline managing the non-operative treatment phase? Grand rounds: Team of prosthodontists are treatment planning cases with students. Students are presenting these cases followed by a group discussion, lead by prosthodontist.

Materials and Techniques- University of British Columbia

Zirconia restorations (preparation guidelines, preclinical and clinical use) In simulation clinics, Zirconia crown teaching is provided variably across the first 3 years as part teaching of all ceramic crowns: DMD1, a generic chamfer ACC prep is introduced for the maxillary incisor in stages starting with the facial surface, but with little emphasis on materials; DMD2, the students learn anterior and posterior tooth ACC preps and more details on glass and zirconia based systems, and DMD3, the students currently learn CAD/CAM applications, but with more emphasis on glass based systems and bonding. In patient care clinics DMD year 3 and 4 students provide supervised patient care incorporating zirconia crowns as needed.

Do you teach bulk fill technique? Bulk fill is taught in dental materials lecture associate to resin composite

- i- If so, what products do you use? Not in use in simulation or patient care clinic yet.

Do you teach the Bioclear method? No

- i- If yes, is it part of the curriculum or main track operative? No

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. No practical sessions on SBS testing

How do you teach post and core? Yes

- i- Human teeth or simulated, (i.e. Accidental or Frasaco)? Currently we are teaching them on simulated fractured Frasaco teeth. They are taught the resin pattern technique for cast post and cores, provisional post and core crowns, and direct fiber posts with provisional crowns.

Are you doing more traditional impressions than scans? almost all impressions for lab work are traditional. For CEREC restorations all are scans.

Are you clinically scanning and milling on the same day? Yes in Term 2, but two separate appointments in term 1. This is based on dedicated faculty availability as we have just two time slots a week available, and there's no digital technician.

- i- Do you have a dedicated faculty/digital technician? See above

Do you teach margin elevation? No

- i- If so, What material do you use?

In your school are micro-etchers introduced? Not in simulation

- i- If Yes - for which procedures?

In your school are the pre-clin students introduced to working on natural teeth?

- i- If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? We no longer use natural teeth for simulation clinics

Which generation bonding agents are you using? 3-step etch& rinse system (4th generation)

What is your success rate with composite restorations at your institution?

This information is currently not available and the faculty is working on some programming to generate reports for Restorative Dentistry procedures associated to direct and indirect restorations, and also Prosthodontic procedures.

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? We have digital QA forms that need to be filled out before any student begins with any Phase II treatment that require the approval of TWO different instructors confirming that Phase I is completed.
Does your school have a separate clinical discipline managing the non-operative treatment phase? No, it is integrated in our clinical discipline. Historically, it used to be separate and that resulted in it being overlooked in the clinical setting, that's why we integrated it into clinical practice.

Materials and Techniques- UCLA
Zirconia restorations (preparation guidelines, preclinical and clinical use) We teach zirconia preparations. We use 3Y zirconia in clinic, and have them made in our digital dentistry clinic as well. We are also teaching zirconia bonding in compromised retention cases.
Do you teach bulk fill technique? No
- i- If so, what products do you use? N/A

Do you teach the Bioclear method? No
- i- If yes, is it part of the curriculum or main track operative? N/A

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. Yes

How do you teach post and core? Students complete RCT's on natural teeth, then they complete post and core projects on those teeth. We will also use typodont teeth as needed, and it has worked out ok.
- i- Human teeth or simulated, (i.e. Accidental or Frasaco)? Human teeth, typically after their RCT projects

Are you doing more traditional impressions than scans? Yes

Are you clinically scanning and milling on the same day? Yes
- i- Do you have a dedicated faculty/digital technician? Yes

Do you teach margin elevation? Yes, but with GI, not composite
- i- If so, What material do you use? GI

In your school are micro-etchers introduced? At our off-site clinic for the D4's.
- i- If Yes - for which procedures? Composites and cementing ceramic restorations

In your school are the pre-clin students introduced to working on natural teeth? Yes
- i- If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? Caries removal and sealants/PRR's. They are stored in bleach solution (1:10)

Which generation bonding agents are you using? Universals (All Bond Univ)

What is your success rate with composite restorations at your institution? Unknown

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? Students can not proceed in axiUm unless they override through faculty approval.

Does your school have a separate clinical discipline managing the non-operative treatment phase? Our school re-organized itself to CPU's, and now we have an Interdisciplinary Dentistry CPU (GPD's and GPL's) who oversee the treatment phasing.

Materials and Techniques- UNLV

Zirconia restorations (preparation guidelines, preclinical and clinical use. Since the ADA is classifying it as a ceramic, we are prepping along ceramic guideline with shoulder margin. We have projects in gold, PFM and all ceramic so the zirconia projects fall within the ceramic projects. Pre-clinically, they are doing 18 projects in each type. There is some discussion among our faculty who believe that the preparation for zirconia crowns should be placed closer to that of the gold preparations, since the material allows for more conservative preparation and thinner margins than the ceramic preparations.

Do you teach bulk fill technique? Bulk fill is discussed in lecture, but the students are actually placing materials with incremental fill. For post endodontic buildups, the students are using _____,

- i- If so, what products do you use? n/a

Do you teach the Bioclear method? No, we are not using the Bioclear method.

- i- If yes, is it part of the curriculum or main track operative?

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. We expose the students to shear bond testing using our own equipment that we purchased. We have 2 machines.

How do you teach post and core? Post and Core is taught with prefab posts. We are not doing any CPC exercises at this time.

- i- Human teeth or simulated, (i.e. Accadental or Frasaco)? We are not using human teeth for P&C projects.

Are you doing more traditional impressions than scans? Traditional, although we are desiring to move in a more digital direction.

Are you clinically scanning and milling on the same day? Yes, but very few procedures actually are scheduled/ accomplished on the same day.

- i- Do you have a dedicated faculty/digital technician? We are developing our faculty and we do have 2 technician(s) devoted to digital dentistry.

Do you teach margin elevation? We teach the theory of margin elevation, but very few are doing it clinically.

i- If so, What material do you use? RMGI (Fuji2LC or Fuji IX, depending on whether we feel we can cure at the gingival margin)

In your school are micro-etchers introduced? Microetching is encouraged and insisted upon by some instructors when delivering crowns. We have 4 microetchers using 50 micrometer Auminum oxice particles

i. If Yes - for which procedures? Any crown delivery—the crowns are microetched just prior to cementation as we teach that the oxide layer increases in the crown as time elapses from the time that the lab microetched it.

In your school are the pre-clin students introduced to working on natural teeth? Yes, for Endo projects, sealants, PRRs and for demonstrating the etching frostiness.

i- If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? NaClO and formocresol solution is the former method, now changing to Thymol.

Which generation bonding agents are you using? 6th generation—3MEXPE Prompt L-Pop (self etching primer and hydrophobic adhesive.

What is your success rate with composite restorations at your institution? There is a research project going on with composite failures in general, not just composites placed here. The largest contributor to failure has been caries, discoloration followed by fracture. The restorations placed here are evaluated at the end of disease control phase to determine if any work needs to be done or re-done prior to definitive/prosthetic phase.

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? We have a pre-prosthetic evaluation in which appropriate x-rays are taken to evaluate the teeth/restorations prior to any prosthetic work.

Does your school have a separate clinical discipline managing the non-operative treatment phase? Not separate; we are managing all the disease processes such as pathology, oral sx, endo and perio in addition to operative. Included in operative would be management of high caries risk factors that can be treated along a medical model.

Materials and Techniques- University of Utah

Zirconia restorations (preparation guidelines, preclinical and clinical use)

a. We teach anterior and posterior full-coverage zirconia restorations. Basic preparation guidelines include: 0.5 to 1 mm axial depth at, or near, the margin, smooth and flowing rounded shoulder (both 3Y-TZP and 5Y-TZP) or chamfer margins (only with 3Y-TZP), 1 to 1.5 mm non-functional cusp clearance, 1.5 to 2

mm functional cusp clearance, rounded internal line and point angles. All dimensions toward the larger number when working with 5Y-TZP.

b. We also teach bonded ceramic onlays, mostly with lithium disilicate, but also with some zirconia application: 2+ mm occlusal clearance, rounded internal angles, and all cavosurface margins at or near 90°exit angles.
c. 92% of all indirect restorative procedures in our clinics are all-ceramic, with the vast majority of those being zirconia, either 3Y-TZP or 5Y-TZP.

Do you teach bulk fill technique? No

i. If so, what products do you use?

Do you teach the Bioclear method? No

i. If yes, is it part of the curriculum or main track operative?

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.

The school has a testing apparatus but there are not any current projects they are using it with.

How do you teach post and core? We have 3 modules covering build-ups and foundations in the pre-clinical fixed pros courses, including posts and cores. The students have an opportunity to do one, or more, build-ups on extracted teeth. One of those modules is specific to the cast post and core. The students must complete a pre-clinical exercise utilizing the cast post and core technique. We find the clinical application to be the real challenge with build-ups, posts, cores, etc… They are so variable that the real learning comes when they are faced with doing a build-up in the clinical setting. The attending clinical faculty are instructed to closely supervise these procedures, especially the first few times they are done.

Human teeth or simulated, (i.e. Accidental or Frasaco)? Both human teeth and a Kilgore simulated tooth for the cast post and core.

Are you doing more traditional impressions than scans? Still more traditional impressions than scans. The criteria we set for the students to be able to use the intraoral scanners for their impressions are quite high. These criteria include 1) having had previous clinical experience with traditional PVS impressions, and 2) we do not allow them to scan 2nd molars, canines and fixed bridges. These must be done traditionally on a semi-adjustable articulator.

Are you clinically scanning and milling on the same day? Yes, but still quite limited. It typically takes the student the entire day, or into the next day to complete. We are using Glidewell's fastmill.io for these. Esthetics are somewhat limited with chairside milling of zirconia, so these are limited to the posterior.

Do you have a dedicated faculty/digital technician? No, some of our faculty have received training to further help attendings on the floor that may need help scanning on the floor

Do you teach margin elevation? No

i. If so, What material do you use?

In your school are micro-etchers introduced? Yes

We have them available to check out chairside and for lab use

i. If Yes - for which procedures? Primarily for bonding of zirconia and for intraoral repairs.

In your school are the pre-clin students introduced to working on natural teeth? Yes, Operative III has an extracted tooth exercise, fixed prost they do build-ups, and endo access /shaping are on 1 plastic tooth and then they practice on extracted teeth after that.

If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? 10% formalin for 2 weeks prior to use. Or a 1:10n dilution of sodium hypochlorite and water.

Which generation bonding agents are you using? Mainly 8th, with some limited 5th and 6th generation use.

l. What is your success rate with composite restorations at your institution?

Range	Quantity D2391,2392, 2393, 2394	Quantity Filling Redo	Success Rate
April 21-Dec 21	1243	16	99%
Jan 22-Aug 22	2236	58	97%

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? This happens at the Group Practice Leader (GPL) level, but improvements could be made.

Each group has its own way to track this. We are trying to make a better habit of recall exam/timelines. One thing that tends to be forgotten is the perio care after the initial

perio check off and then it doesn't get checked again until after all Tx or transfer to a new student.

Does your school have a separate clinical discipline managing the non-operative treatment phase?

We have perio, prosth, OS, and Path all working with the general practitioners to best provide patient treatment but it is the general practitioners that provide oversight with the specialties consulting/overseeing Tx when needed. If there is a department specific Tx (especially Os and/or Perio) they will oversee Tx.

Materials and Techniques- University of the Pacific

Zirconia restorations (preparation guidelines, preclinical and clinical use) Yes, both preclinical and clinical.
Do you teach bulk fill technique? No

i. If so, what products do you use?

Do you teach the Bioclear method? No

i. If yes, is it part of the curriculum or main track operative?

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. Recently after covid they have not been but this course is likely to start again soon.

How do you teach post and core?

i. Human teeth or simulated, (i.e. Accidental or Frasaco)?
Acadental 3D Recent
Acadental 3D Recent
RCT treated natural tooth

Are you doing more traditional impressions than scans? Currently, yes

Are you clinically scanning and milling on the same day? No

i. Do you have a dedicated faculty/digital technician? No

Do you teach margin elevation? No

i. If so, What material do you use?

In your school are micro-etchers introduced? Yes

i. If Yes - for which procedures? Crown Cementation

In your school are the pre-clin students introduced to working on natural teeth? Yes

i. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? Operative Procedures,
Natural Teeth are stored Excell Plus Fixodent solution

Which generation bonding agents are you using? 6 and 7

What is your success rate with composite restorations at your institution? 95%

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?

Does your school have a separate clinical discipline managing the non-operative treatment phase? No

Materials and Techniques- USC

Zirconia restorations (preparation guidelines, preclinical and clinical use)

Preclinical and clinical use with 0.5 mm rounded shoulder and 1 mm occlusal for monolithic zirconia restorations. Veneered zirconia restorations (PFZ) with 1.5-2 mm occlusal reduction and 1 mm on facial.

Do you teach bulk fill technique?

i- If so, what products do you use?

No

Do you teach the Bioclear method?

i- If yes, is it part of the curriculum or main track operative?

No

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.

No, but residents in advanced programs do get exposed to the Ultradent method.

How do you teach post and core?

i- Human teeth or simulated, (i.e. Accidental or Frasaco)?

Acadental tooth treated in endo module, then post and core performed in the integrated restorative module (module at the end of the preclinic, before students go to the clinic, covering all restorative procedures). Only fiber posts used and taught (Parapost Taper Lux or Parapost Fiber Lux).

Are you doing more traditional impressions than scans?

Scans for in-house restorations (CAD/CAM onlays or inlays; some crowns)
Impressions for outside lab restorations
Students performing first-time scan, conventional PVS impression is taken first, which then is poured and scanned.

Are you clinically scanning and milling on the same day?

i- Do you have a dedicated faculty/digital technician?

In select cases.
Dedicated faculty for CAD/CAM, who help with scanning, design, and milling.

Do you teach margin elevation?

i- If so, What material do you use?

No

In your school are micro-etchers introduced?

i- If Yes - for which procedures?

Yes, Microetcher IIA (Danville Materials) with 27 micron (surface conditioning) or 50 micron (minimally invasive preparations - PRRs)

Rondoflex for PRRs

In your school are the pre-clin students introduced to working on natural teeth?

i- If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?

Yes, in endo module. Disinfection done using Chloramine-T.

Which generation bonding agents are you using?

Used by DDS students:
3-step etch-and-rinse (4th generation; Optibond FL)
2 step self-etch (6th generation; Parabond - however, used without the non-rinse conditioner, instead using phosphoric acid. Parabond used only for use with Paracore for bonding of fiber posts)
Used by advanced programs (Operative and Pros only)
Universal bonding agent (8th generation; Scotchbond Universal)

What is your success rate with composite restorations at your institution?

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?

CAMBRA protocol mandatory for every patient (control phase). Up to individual faculty members to ensure procedures of phase 1 have been completed.

Does your school have a separate clinical discipline managing the non-operative treatment phase?

As part of integrated course
"Integrated" clinical module with perio/endo/oral surgery participating during non-operative treatment phase

Materials and Techniques- University of Washington

Zirconia restorations (preparation guidelines, preclinical and clinical use) **Not part of operative course (taught in fixed pros). But for the CADCAM course we refer to the instructions published by Kuraray Noritake for Katana zirconia. We discussed bonded Zr onlay as well.**

Do you teach bulk fill technique? **No**
i-If so, what products do you use? **We do have Filtek Bulk Flow**

Do you teach the Bioclear method? **No, but we have an optional seminar with handson presented by the company.**
i-If yes, is it part of the curriculum or main track operative?

Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. **No, not in operative. As a bondodontist, I do use Bisco micro tensile tester for students in research rotation (SURF) to learn about bonding tests.**

How do you teach post and core? **Not in operative. Students do learn about various post and core build up including conventional, prefabricated, fiber post and fiber-reinforced core buildups in fixed prosth preclinics and restorative clerkships.**
i-Human teeth or simulated, (i.e. Accidental or Frasaco)? **Simulated, Frasaco and Columbia. Endo uses Acadental.**

Are you doing more traditional impressions than scans? **Yes, but quickly shifting to a balance between the two for the 4th year dental students.**

Are you clinically scanning and milling on the same day? **Not routinely, but we have the equipment and a new digital dentistry selective in 4th year in a dedicated clinic to do this.**
i-Do you have a dedicated faculty/digital technician? **We have faculty designated for digital dentistry but not a technician at this time. We are considering hiring a dedicated digital dentistry technician.**

Do you teach margin elevation? **Yes, but only for direct restorations at this time. Currently we do not teach indirect restoration margin placement on restorative materials.**
i-If so, What material do you use? **Modified tofflemire or Garrison Slick DME bands, use with flowable and/or hybrid composites or RMGI.**

In your school are micro-etchers introduced? **Yes**
i- If Yes - for which procedures? **Bonding to uncut enamel, microinvasive preparations, sealants, PRRs, enamel discoloration, bond to old composite, Zirconia and metal bonding, etc. It is available in the clinics.**

In your school are the pre-clin students introduced to working on natural teeth? **Yes**
i-If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? **Caries removal, composite restorations and endodontics. Chloramine T and bleach, and/or thymol. These exercises are not graded.**

Which generation bonding agents are you using? **Currently Universal (SBU, Adhese, All-Bond-U, Optibond-Solo) and two-step self-etch (Clearfil SE 2 and SE Protect), Optibond FL 3-step etch & rinse (4th) in preclinics. In clinics we have SBU and Adhese.**

What is your success rate with composite restorations at your institution? **No official data, but pretty good.**

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? **Our treatment planning module in Axium, is programmed to not allow further phase procedures to be started without completing prior ones. It is annoying at times :)**

Does your school have a separate clinical discipline managing the non-operative treatment phase? **Maybe, Oral diagnosis/treatment planning and operative clerkships handle this phase.**

Materials and Techniques- **WesternUniversity**
Zirconia restorations (preparation guidelines, preclinical and clinical use)

a. Increasing popularity due to cost of PFM materials

b. Working on CAD/CAM in the future
c. Limited didactics in preclinical. Zirconia curriculum is planned for the future.

Do you teach bulk fill technique?
i-If so, what products do you use?
Yes, SDR +
Do you teach the Bioclear method?
i-If yes, is it part of the curriculum or main track operative?
No
Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.
No
How do you teach post and core?
i- Human teeth or simulated, (i.e. Acadental or Frasaco)?
Simulated (Acadental) with Unicore system after they treat the tooth for endo.

Are you doing more traditional impressions than scans?
Decent amount of both. Traditional for removable and diagnostic. Scanning is becoming more common with crowns and onlays.

Are you clinically scanning and milling on the same day?
i-Do you have a dedicated faculty/digital technician?
Generally not same day due to resources/faculty time, but it is possible. No dedicated technician for design. All floor faculty comfortable with design are allowed to. Our lab technician and prosthodontic faculty work the mill.

Do you teach margin elevation?
i-If so, What material do you use?
Yes… OptiBond FL + Herculite Ultra + e.Max CAD/CAM

In your school are micro-etchers introduced?
i- If Yes - for which procedures?
We only have 1 micro etcher. Used for bonding to immediate dentin sealed tooth substrates and composite indirect restorations.

In your school are the pre-clin students introduced to working on natural teeth?
i-If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?
Yes, primarily for Endodontics. They are also used for sealants and composite restorations. Teeth are autoclave sterilized via steam.
Which generation bonding agents are you using?
Primarily Fourth (OptiBond FL)
What is your success rate with composite restorations at your institution?

~ 97.0% according to our Quality Assurance Metrics.

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?
Ensure the pt is not in pain before proceeding to other treatment.

Does your school have a separate clinical discipline managing the non-operative treatment phase?
No. All clinical disciplines are handled within the group. Specialists are consulted as needed.

III. Student Assessment- A.T. Still

How to address students with anxiety and overcoming failures
We watch student's progress at the beginning of every module and we approach the students early to address our concerns and work with them to help them progress. We also explain to them if they fail what policy and procedures we will implement to help succeed so there is always a plan which make them feel they are not alone and we are there to help them

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?
Yes we change scenarios and requirements. Student's daily projects are graded as P/F. The final module grade determine by the Progress exams and summative credentialing exams.

How many Mock Board sessions are you performing?
Two Clinical Mock board. We don't offer a mock exam for the INBDE

Is your state/region permitting or considering the DLOSCE for licensure?
yes

For regional licensure exams, are you opting for live or simulated examinations?
BOTH if needed

i. Do you use prefabricated carious teeth for simulated exams?
YES

Student Assessment- California Northstate University

How to address students with anxiety and overcoming failures Start the course relating to the students that failure is expected and encouraged to facilitate learning. I use with my students the acronym F.A.I.L. (First attempts in Learning)

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? There are no "projects" only daily exercises that will have a daily grade/assessment.

How many Mock Board sessions are you performing?

Is your state/region permitting or considering the DLOSCE for licensure?

For regional licensure exams, are you opting for live or simulated examinations?

Do you use prefabricated carious teeth for simulated exams?

Student Assessment- Loma Linda University

How to address students with anxiety and overcoming failures ?

We offer in-house counseling for mental health. We also provide extra tutoring sessions (specifically for Operative Dentistry) to help students get used to testing simulations.

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? The students prepare the teeth during lab session under the supervision of our preclinical faculty and we always add to our projects new assignments.

How many Mock Board sessions are you performing? One session

Is your state/region permitting or considering the DLOSCE for licensure? Still discussing it but no legal legislation in place, yet.

For regional licensure exams, are you opting for live or simulated examinations? Simulated examination

i. Do you use prefabricated carious teeth for simulated exams? Yes

Student Assessment- Midwestern University

How to address students with anxiety and overcoming failures

Students Services

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?

Graded during class

How many Mock Board sessions are you performing?

1 endo, 1 prosth

Is your state/region permitting or considering the DLOSCE for licensure?

No

For regional licensure exams, are you opting for live or simulated examinations?

Simulated

i- Do you use prefabricated carious teeth for simulated exams?

Yes

Student Assessment- OHSU

How to address students with anxiety and overcoming failures OHSU Teaching $ Learning Center help students' academic performance and Student Health & Welness manage students' anxiety.

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? New fluorescent test teeth are provided for each exam.
How many Mock Board sessions are you performing? Students have to one out of three sessions.
Is your state/region permitting or considering the DLOSCE for licensure? Our state permitting DCLOSCE.
For regional licensure exams, are you opting for live or simulated examinations? Simulated examinations

i- Do you use prefabricated carious teeth for simulated exams? We use prefabricate carious teeth

Student Assessment- University of Alberta

How to address students with anxiety and overcoming failures
Faculty advisors. Student affairs.
How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? Daily progress reports document whether the project was completed the same day. Preclinical exams: Student has to hand in the project at the end of the session. Different quadrants or teeth are being worked on in operative each year.
How many Mock Board sessions are you performing? 2
Is your state/region permitting or considering the DLOSCE for licensure? no.
For regional licensure exams, are you opting for live or simulated examinations? no hands on component.

i. Do you use prefabricated carious teeth for simulated exams? Pre clinical exams: combination of single layer resin teeth, prefabricated preprepared teeth, prefabricated carious teeth.

Student Assessment- University of British Columbia

How to address students with anxiety and overcoming failures Our Student Services office provides students with information and can direct them towards resources that are available on campus and in the community. In addition of Faculty offers the services of an embedded registered clinical counsellor at no charge to students.
In Restorative Dentistry modules, more specifically, this is addressed directly when introducing the students to the complex challenges of restorative dentistry, and particularly the likelihood of initially not meeting a standard of clinical acceptability during the simulation environment of timed clinical sim quizzes for either direct restorations or crown prep and provisional exercises. Remediation is provided as needed, since achieving clinically acceptable outcomes in timed quizzes in simulation is a primary criterion for allowing clearance for subsequently providing supervised clinical care.

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?

RD(Restorative Dentistry)1 (DMD1) - We have a system in place for DMD1. Students are required to take pictures of their dentoforms with completed exercises, upload them in a template provided in the course, and submit it as a PDF on Canvas. In addition, all teeth included in the pictures must be handed in on the last sim session of the term, until grading has been finalized. Teeth are returned to students after grading

RD2 (DMD2) - students are increasingly expected to take professional responsibility for their learning through a combination of timed-quizzes, where the student is provided a marked tooth that after completion is handed in for grading, and non-timed exercises were ample supervision and evaluation is undertaken by instructors but strict policing of the student doing the work is not attempted. As part of this process, students learn that their goal is to prepare themselves for the task of providing supervised clinical care.

RD3 (DMD3) - It is very difficult to 100 percent ensure students are submitting their own clinical work for grading. We attempt to provide adequate time for the students to complete exercises within the scheduled curricular time so that students are less likely to need to use non-curricular time (evening practice) to complete their exercises. Allowing more curricular time has allowed instructors to observe students preparing their exercises and this hopefully also mitigates the desire for students to submit other's work for their own.

How many Mock Board sessions are you performing? Our program does not schedule Mock Board sessions for clinical skills because there is not a clinical component in the Canadian NDEB certification Examination

Is your state/region permitting or considering the DLOSCE for licensure? No. As a Canadian program our students sit the NDEB certification Examination
For regional licensure exams, are you opting for live or simulated examinations? NA
i-Do you use prefabricated carious teeth for simulated exams? We have incorporated 3D simulated carious teeth for some exercises in R1 and R2. We are not using those in clinical exams.

Student Assessment- UCLA

How to address students with anxiety and overcoming failures Referral to campus resources
How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? No formal policy is in place
How many Mock Board sessions are you performing? One every year, a few months before the exam
Is your state/region permitting or considering the DLOSCE for licensure? Yes

For regional licensure exams, are you opting for live or simulated examinations? Simulated
i-Do you use prefabricated carious teeth for simulated exams? Yes

Student Assessments- UNLV

How to address students with anxiety and overcoming failures Students are reminded at orientation sessions each term that there are services available on the main campus. A referral is made from the Office of Student Affairs, which has an open door policy for students in distress. Services include tutoring, testing accomodations, etc.

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? Sim clinic projects receive only a P/F grading and the student is given feedback so that they can make appropriate changes in anticipation of a competency assessment. It is up to the bench instructor to see the start point, progress during and the final product. Students could substitute someone else's work, but that would not help them necessarily.

How many Mock Board sessions are you performing? Only 1 and it is not on live patients, but rather a typodont project. There has not been a live patient mock board since before the pandemic.

Is your state/region permitting or considering the DLOSCE for licensure? No, Nevada is not considering the DLOSCE

For regional licensure exams, are you opting for live or simulated examinations? Live patient operative and perio and simulated endo, treatment planning,

i- Do you use prefabricated carious teeth for simulated exams? Yes, we are in the process of buying a printer that we can print our own caries teeth.

Student Assessment- University of Utah

How to address students with anxiety and overcoming failures let them know early of all the resources available and welcome them to talk to our Assistant Dean of EDI. Along with initially providing support and contacts for outreach, all emails sent by the Dean include these resources at the bottom of the email. The short answer is – we are talking about it more and offer resources often.

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? Currently, we have nothing in place to prevent this, but it does need to be addressed.

Due to our small class size and the way our projects are graded we have not come across a need to strap down on this. Each week is a participation exercise in operative and we are able to monitor the 50 students during a practical so they are not able to change teeth

How many Mock Board sessions are you performing? Two, plus individualized follow-up with each student.

This year we will be holding Mock Boards in two separate sections

1) Endo and Prost
2) Restorative/Perio

Is your state/region permitting or considering the DLOSCE for licensure? No

For regional licensure exams, are you opting for live or simulated examinations? Simulated

i. Do you use prefabricated carious teeth for simulated exams? The students will get to practice on a limited number of prefabricated carious teeth.

Student Assessment- University of the Pacific

How to address students with anxiety and overcoming failures – We have faculty advisors to students, and we offer counseling and psychological services through the University. We also have Saturday Remedial sessions taught by faculty and tutors before Thursday practical exams.

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?
Majority of the projects are class projects and supervised by faculty and are checked off on the same day. In some courses the teeth are marked prior to the test

How many Mock Board sessions are you performing? We are currently in the process of changing our licensure preparation courses. The students take mock boards and also have practice and certification sessions.
Is your state/region permitting or considering the DLOSCE for licensure?

For regional licensure exams, are you opting for live or simulated examinations? Both are available to student. Simulated is taken by majority

i. Do you use prefabricated carious teeth for simulated exams? Yes

Student Assessment- USC

How to address students with anxiety and overcoming failures

Support through Office of Academic Life, also, Office of Academic Affairs refers students to resources available through main university at student health center (Campus Support & Intervention; Counseling and Mental Health)

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?

Collect projects after finishing.
Photographic documentation of steps.
For exams, seal typodonts
Remind students of ethical conduct. They only harm themselves by cheating.

How many Mock Board sessions are you performing?

1 session 1-2 months before licensing exam

Is your state/region permitting or considering the DLOSCE for licensure?

Currently not permitted in CA, not considered at our school

For regional licensure exams, are you opting for live or simulated examinations?

i- Do you use prefabricated carious teeth for simulated exams?

Simulated examinations favored
In preclinical simlab modules:
Single layer teeth (Columbia)
Caries simulated teeth (Columbia)

Student Assessment- University of Washington

How to address students with anxiety and overcoming failures **We have a dedicated Student Life and Services office run by our psychologist faculty offering counseling and support. We believe in a humanistic approach.**

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?

Each typodont is encoded an with an embedded secret number. All our final exams use color or number coded teeth with a supervisory mechanism during live in person practical exams which makes it impossible to cheat. I would be very interested in learning how cheating would be even possible in UW preclinical operative course.

How many Mock Board sessions are you performing?

We have a Mock Board exam for Class 2 Composite (or Amalgam) preparations and restorations. We also have a simulated Class 3 preparation and restoration.

We have a Mock Board exam for the Prosthodontic tooth preparations. molar metallic abutment tooth and a premolar PFM abutment. Also we give an all ceramic anterior crown preparation exam.

We have a Mock Board exam for the Endo Examination using an Acadental tooth.

The Endo and Prosthodontics exams are not "Mock Board" exams. They are competency exams and must be passed by 4th year students. These are good practice for the CDCA-WREB examination, however.

Is your state/region permitting or considering the DLOSCE for licensure? **Yes, the state recognizes the DLOSCE for licensure as well as the CDCA-WREB exam.**

For regional licensure exams, are you opting for live or simulated examinations? **We use simulated examinations for licensure. We do not have live patient examinations. We use the ModuPRO testing materials.**
i-Do you use prefabricated carious teeth for simulated exams? **Yes.**

Student Assessment- Western University
How to address students with anxiety and overcoming failures
Each group of students has multiple mentors they can go to with questions and concerns. They are assigned a mentor at admission and then are also expected to primarily work under only a small number of faculty pre-clinically and clinically. These mentors know the students well and can recommend resources as soon as they notice a struggling student.

How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?
Students are required to turn in their project. Students are also assigned labeled exam teeth.
How many Mock Board sessions are you performing? There previously was one Mock WREB exam performed a little less than a month before actual WREB which takes multiple days. This will be changing to ADEX this year, but the process will likely stay the same.

Is your state/region permitting or considering the DLOSCE for licensure?
Not currently.
For regional licensure exams, are you opting for live or simulated examinations?
i-Do you use prefabricated carious teeth for simulated exams?

1. All but one student opted for simulated exams last year.
2. Students are largely switching to simulated.

3. Students receive a limited number of prefabricated carious teeth to practice on.

IV. Administration- A.T. Still

How do you recruit adjunct faculty?

We post position and interview applicant. Also our graduates like to come back and wok in the pre-clinic and the clinic

How do you calibrate/align faculty?

A new faculty watches videos to prepare for the clinic/ sim-clinic sessions. Usually a new faculty shadow another faulty for period of time for the sessions before they become responsible to supervise students. Also the university provide new employee orientation.

How do you monitor and manage student learner requests for excused absences related to COVID-19?

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)
ii. How do you manage these missed assessments?

We created a COVID email address the student will need to email to get advice and be approved. We follow CDC recommendation. Also we consult with our medical school faculty.

If they miss assessment, they must take the assessment after they return, usually it is scheduled at 7 Am so they do not miss class.

What opportunities does your institution provide to help develop junior operative faculty?

i- What academic/administrative career trajectories do operative trained faculty typically pursue?

We do not have an operative residency. We have an operative course director who teaches all the operative module and work in the clinic with the CCU director. This faculty also responsible to update the other faculty and provide CE.

Administration- California Northstate

How do you recruit adjunct faculty? Local community and local dental society.

How do you calibrate/align faculty? Calibration sessions and the course director working with sim lab faculty daily.

How do you monitor and manage student learner requests for excused absences related to COVID-19? They must get approved.

a. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) If they test negative they need to come to class.
b. How do you manage these missed assessments?

What opportunities does your institution provide to help develop junior operative faculty?

i- What academic/administrative career trajectories do operative trained faculty typically pursue?

Administration- Loma Linda University
How do you recruit adjunct faculty? We really don't recruit adjunct faculty, no part time / adjunct faculty teaching operative.

How do you calibrate/align faculty? We calibrate our faculty through quarterly calibration assignments

How do you monitor and manage student learner requests for excused absences related to COVID-19? We have one extra laboratory session / week which is mainly for students who need more time to practice under faculty supervision, and for students who missed sessions due to COVID 19

1. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) Fortunately, it didn't happen

2. How do you manage these missed assessments? Schedule the assessment to be taken on another day during the quarter

What opportunities does your institution provide to help develop junior operative faculty?

We don't have junior operative faculty, we have small group of Veterans help in operative laboratory and for everyone we do annual operative calibration through canvas that would be our general operative development

i. What academic/administrative career trajectories do operative trained faculty typically pursue? Our operative people want to continue to be frontline teachers to help our students

Administration- Midwestern University
How do you recruit adjunct faculty?
Word of mouth and advertising
How do you calibrate/align faculty?
Paired up with seasoned faculty
How do you monitor and manage student learner requests for excused absences related to COVID-19?

i- (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)

We keep track of missed projects and assignments and they have to make it up

ii- How do you manage these missed assessments?

They take them at the end of the quarter

What opportunities does your institution provide to help develop junior operative faculty?

Mentoring committee, research opportunities, leading and teaching opportunities

i- What academic/administrative career trajectories do operative trained faculty typically pursue?

Clinical or Preclinical

Administration- OHSU

How do you recruit adjunct faculty? Invite volunteer instructors first, then we recruit from them

How do you calibrate/align faculty? Study club, Online modules

How do you monitor and manage student learner requests for excused absences related to COVID-19?

Students report to course directors and the Office of Academic Systems. Students must follow OHSU institutional standardized protocols. Student health and wellness and the COVID access pass help students discern if they are eligible to attend class.

i- (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)

COVID access pass and Student Health are guides to whether a student is excused from class.

ii- How do you manage these missed assessments?

Course directors coordinate with our Office of Academic Systems to either take exams remotely or to take the exam in a make-up session when they return. It creates a lot of work for the course directors.

What opportunities does your institution provide to help develop junior operative faculty?

Participation in ADEA emerging leaders Programs

Research faculty mentoring program

i- What academic/administrative career trajectories do operative trained faculty typically pursue?

Administration- University of Alberta

a. How do you recruit adjunct faculty? Positions get posted through the school. I am not involved in that.
b. How do you calibrate/align faculty? Calibration sessions twice a year for all faculty. Regular meetings within restorative group. Part timers are getting instructed by clinic faculty members.
c. How do you monitor and manage student learner requests for excused absences related to COVID-19? NA. We haven't had that happen as far as I know. We have a limited number of remediation sessions. There are no sessions offered outside of term.
    i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)
    ii. How do you manage these missed assessments?
d. What opportunities does your institution provide to help develop junior operative faculty?
    i. What academic/administrative career trajectories do operative trained faculty typically pursue?
    One example: Master of education in health sciences education.

Administration- University of British Columbia

How do you recruit adjunct faculty? We reach out to community practitioners to attract potential adjunct faculty for our preclinical and clinical sessions. We also approach grad students with teaching opportunities.

How do you calibrate/align faculty?

RD1 - sessional instructors are calibrated by three means: 1) attending the didactic (or Q&A) portion of the session at the beginning; 2) group discussion and guidance for instructors only while students get ready for the sim clinic; 3) 15 min wrap up at the end of the session for discussions, suggestions, questions.

RD2 - sessional instructors are also calibrated by attending the didactic (or Q&A) portion of the session at the beginning; and by group discussion and guidance for instructors. The majority of instructors are continuing experienced instructors from the previous year, and are assigned to new instructors teach alongside these more experienced instructors in groups of three.

RD3 - We do group grading of timed clinical exercises which helps with some of the calibration issues. The main method is to have instructors attend all the pre-clinical session lectures so that the instructors are provided the same criteria and background as the students.

How do you monitor and manage student learner requests for excused absences related to COVID-19? In general, UBC Dentistry has an open policy regarding absences. Excused absences may be unanticipated (e.g., illness, injury, bereavement) or anticipated. Examples of anticipated absences that would usually be excused include religious holiday, academic pursuits of a one-time nature (e.g., commencement exercises, attendance at scientific meeting for the purpose of either presenting a research paper

or to accept an award or other academic distinction), participation in major varsity team events, participation in major faculty activities or in worthy social endeavors (e.g., planning of a fundraising, education or other community event), or rare occurrences (e.g., compassionate leave) that cannot reasonably be scheduled outside of class time. Students must contact the Assistant Manager, Student Services to obtain permission for an excused absence.

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) Students are not required to submit documentation for short term absences. Extended absences, normally defined as a period of greater than five (5) consecutive working days, require a written request and must be approved by the Program Director. An extended leave for medical reasons may require appropriate documentation from the student's physician

ii- How do you manage these missed assessments?

RD1 - Missed assessments are embedded in future sim sessions. If one or more students are behind at the end of each term, a catch-up session is offered

RD2 - Missed time (with instructor supervision) cannot be made up; however, there is adequate time embedded through the year for some catch up, and missed assessments are embedded in future sim sessions

RD3 - Fortunately, this has only occurred a handful of times and at times which were not critical in the schedule. Students are generally allowed to progress at their own pace and the schedule is designed to allow students who happen to miss one or two sessions the ability to catch up fairly quickly.

RD2 and RD3 independent practice sessions, 2 evenings per week, are also available for catch-up.

What opportunities does your institution provide to help develop junior operative faculty?

i- What academic/administrative career trajectories do operative trained faculty typically pursue? The restorative dentistry full-time faculty members are in one of the three main academic careers at UBC: Professorial Stream (research-intensive tenure-track); Educational Leadership Stream (education tenure-track); or Lecturer. The assessments for promotion and tenure for the first two positions vary based on each track, being Research/Teaching/Service for the first, and Educational Leadership/Teaching/Service for the second. The lecture positions are tailored for clinical faculty members, allowing those individuals to be a

member of the faculty association and have similar benefits as the first two. For tenure-track careers, a formal mentor.

Administration- UCLA

How do you recruit adjunct faculty? Word of mouth

How do you calibrate/align faculty? Quarterly calibration meetings, online guides and references, websites (CCLE and CADE)

How do you monitor and manage student learner requests for excused absences related to COVID-19? Students submit requests for excused absences to student affairs office, and that's what we go by.

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)

ii- How do you manage these missed assessments? Students complete make up exam/assignments at a later time

What opportunities does your institution provide to help develop junior operative faculty? Mentorship, annual mentor meetings

i- What academic/administrative career trajectories do operative trained faculty typically pursue? Primarily section chairs, course chairs

Administration- UNLV

How do you recruit adjunct faculty? We have not done a good job of recruiting and that is why we don't have enough faculty. We need to cast a wider net or perhaps concentrate on advertising with more widely read publications to get the word out regarding opportunities in academic dentistry.

How do you calibrate/align faculty? Each month, we are exposed to an aspect of dentistry to discuss what is being taught at the preclinical level and compare to what is being taught at the clinical level. The next step on the calibration is to discuss cases along a discipline to arrive at a more unified approach to treatment—we use case based examples to develop our discussions

How do you monitor and manage student learner requests for excused absences related to COVID-19?

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) Students are able to get a medically excused absence with a PSR test. If they called in as positive on a home test, they were required to quarantine for 5 days. We didn't have too many people missing exams because make up exams had to be challenged within the time frame that the course director

prescribed and the tests were different tests.

ii. How do you manage these missed assessments? It was already provided for in the syllabus that make up exams were to be administered within a certain make up period and the tests were different exams

What opportunities does your institution provide to help develop junior operative faculty? Our view isn't just toward junior operative faculty, we are trying to develop junior faculty to 1) stay in academic dentistry and 2) develop professionally in the areas of teaching, scholarly activity and service. We try to identify mentors for both scholarly activity and promotion at the time of early employment

i- What academic/administrative career trajectories do operative trained faculty typically pursue?

Our faculty are not just operative trained. Our faculty are general dentists who are responsible for teaching along a comprehensive model. Some gravitate toward what they do best and some are developing in other areas with the help of their colleagues, with calibration sessions and with mentors

Administration- University of Utah

a. How do you recruit adjunct faculty? We post our listings nationally (ADA, ADEA) and any local dental societies (UDA). If we are offering a position for a specialist we will post on the specific specialty orgs.

b. How do you calibrate/align faculty? We have a monthly calibration that cover a variety of topics from didactics to clinical that are recorded for those that can't attend in-person. They can watch these before they are due at the end of the year and fill out a participation quiz through Canvas.

As a new faculty member they are encouraged to watch the recordings from the previous year/years as they are waiting to be credentialed.

c. How do you monitor and manage student learner requests for excused absences related to COVID-19? We do not have a centralized system at this time. At the height of the pandemic we as a school tracked all students/faculty/staff but now the UofU tracks all of this through work wellness. Each class now manages this themselves. Our school has been very encouraging to take the day off if you are not feeling well and wait for a covid test result that is offered through a vending machine located at our school. We encourage students to work with faculty to make sure they are caught up.

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) – we have not had this situation taken advantage of at a level that we need to have a policy about it.

ii. How do you manage these missed assessments? We offer after hours help 2 days/week for students falling behind or for extra practice/feedback. The students also have 4 full hours in the lab due to asynchronous lectures. This has provided and extra 1-1.5 hrs of lab time without an increase in projects due.

d. What opportunities does your institution provide to help develop junior operative faculty? No specific development is in place. We calibrate new faculty as they come on and encourage new faculty to take on new projects as they are able/willing.

i. What academic/administrative career trajectories do operative trained faculty typically pursue? There is not a pattern at our school. Because our institution is so small, opportunities arise for faculty that may not at a larger institution.

Administration- University of the Pacific

a. How do you recruit adjunct faculty? Word of mouth and school website posting and alumni

b. How do you calibrate/align faculty? Quarterly calibration meetings and asynchronous online modules to be completed at a 100% participation rate. Preclinical faculty are calibrated before each practical.

c. How do you monitor and manage student learner requests for excused absences related to COVID-19? The decision is at the discretion of each course director.

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)

ii. How do you manage these missed assessments? The decision is at the discretion of each course director.

d. What opportunities does your institution provide to help develop junior operative faculty? Preclinical faculty are encouraged and mentored in creating updated and new lectures and demonstrations. MMFEs by department chairs and planning career pathways.

i. What academic/administrative career trajectories do operative trained faculty typically pursue? The start from instructor in the preclinic, and then they can choose to become course directors, and help in clinical teaching.

Administration- USC

How do you recruit adjunct faculty?

Word of mouth for volunteers

Posted on USC faculty site

Word of mouth

How do you calibrate/align faculty?

Participate in preclinical modules before going to clinic.

Regular In-person and online calibration with CE credits

How do you monitor and manage student learner requests for excused absences related to COVID-19?

ii- (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)

iii- How do you manage these missed assessments?

Students report to module director and Office of Academic Affairs. Module directors manage make-up on individual basis.

Less absence with Zoom proctored exams.

What opportunities does your institution provide to help develop junior operative faculty?

i- What academic/administrative career trajectories do operative trained faculty typically pursue?

Calibration as regular faculty member in various preclinical modules, later on as module director.

Clinical track as preclinical module directors or clinical Group Practice Directors.

Center for Excellence in Teaching

Administration- University of Washington

How do you recruit adjunct faculty? **Word of mouth, friendships, fund raiser events and alumni newsletter. Huskies bleed purple and gold: their help, teaching and donations have been crucial for our success in education in restorative dentistry.**

How do you calibrate/align faculty? **This is a difficult task. Fortunately we have a strong alumni support and continuity in education over decades of teaching and a common**

practice philosophy. Materials and techniques may change but we stay true to our patient care philosophy and values at UW. That automatically helps with calibration. In addition we have calibration materials posted online as a Canvas course for our core and affiliate faculty. We also have calibration sessions before each grading session for preclinical exams. We ask our affiliate faculty to attend class lectures and review handouts; they receive CE credits for that. We also have a case review and calibration sessions in each monthly department meeting where we discuss clinical cases in student clinics. These sessions are recorded and are available for our faculty to review.

How do you monitor and manage student learner requests for excused absences related to COVID-19?

(e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) **these cases are not very common at UW. We see this often with cases presenting s positive test.**

How do you manage these missed assessments? **Students are required to complete the assignments on their own and present the completed projects. If an exam or a graded exercises missed that will be repeated and accommodated. Most classes are now recorded, the recordings will be available to those who have an excused absence. Faculty vary in their preference of making recordings generally available to the class or only available to those who were absent.**

What opportunities does your institution provide to help develop junior operative faculty? **Peer mentoring is a core function of our education where 4th year dental students are available to teach and evaluate preclinical students (1st and 2nd year students). This experience is positive and encourages the students to come back to the school to teach, at various levels, at some point throughout their career.**

i- What academic/administrative career trajectories do operative trained faculty typically pursue? **Currently the Chair and Vice-chair of restorative department (largest department covering operative, prosthodontics, dental materials and treatment planning) and the Dean of the UW School of Dentistry are dentists with advanced education in Operative Dentistry. We encourage higher education (AGD/GPR, MSc, PhD) in this field and embrace faculty with such educational background. Research is a core value in our department and recruitment of full time faculty with research background and experience is prioritized.**

Administration- Western University

How do you recruit adjunct faculty?

Same process as other faculty. Positions are posted, individuals apply, are vetted through the faculty search committee and final word rests with the Dean.

How do you calibrate/align faculty?
This largely depends on the curricular block; however, the school has a faculty development committee that often uses CE type courses to help calibrate faculty. We do have a once a year for clinical faculty that encompasses the CA Portfolio and our Independent Patient Clinical Exams.

How do you monitor and manage student learner requests for excused absences related to COVID-19?

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) Each of the curricular blocks are notified when students are out with COVID. It typically takes students 8 or 9 days to clear with a Rapid Antigen Test. We have the curricular blocks with them to make-up what is necessary and move on.

ii. How do you manage these missed assessments?

1. Pending their symptoms, they take the assessment at a later date. If symptoms are mild, they can take the assessment online, if feasible.
2. Though most students are concerned with this, we have not heard any complaints with the ability to make-up missed assignments or assessments.

What opportunities does your institution provide to help develop junior operative faculty?

ii- What academic/administrative career trajectories do operative trained faculty typically pursue?

1. There are many options for CE through the faculty development committee.
2. Those interested tend to pursue the Associate and Full Professor route of promotion. Clinically, the research component tends to be the most difficult due to limited resources.

Region II

2022 National Agenda

V. Curriculum

a. Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

(CU – Colorado) Yes, we had different phases through the pandemic until normal operations were resumed. We had significant changes in May 2021, including increasing the number of patients seen in each clinic session, lifting the sign-up lists for evening and weekend student practice at Simulation Lab, and returning to Simulation Lab's total capacity. In February 2022, the lectures returned to in-person format, and preclinical returned to the pre-COVID schedule. As of August 2021, we resumed pre-COVID-19 use of the clinic.

(Creighton) Schedule changes that had been greatly expanded returned to normal. Some of the curriculum changes had to do with remote learning and posting everything electronically to include testing. The few remaining areas of the curriculum that had not already adopted this format were updated to this format delivery; however, the expectation for classroom attendance has returned.

(SIU) No, returned to normal schedule.

(UMKC) They were, for the most part, gradually removed and "normal operations" resumed for the most part. One thing that has remained is required/strongly suggested recording of all lectures (Panopto) to accommodate students who must miss due to illness or quarantine times. Electric handpieces available to take home for practice (were given to all students in class of 2024, now on a "check out" basis.)

(Iowa) The content of the material has not changed much due to pandemic other than updating the evidence. However, some of the videos made during the pandemic are still being used after pandemic. The schedule was modified for the 2nd year operative students to have Fall semester preclinical and Spring semester clinical exposure.

(UMN) There was an expectation that all didactic courses would return to in-person instruction, unless there was a demonstrated educational rationale for maintaining on-line or blended instruction. Mask mandates have been removed from the campus as a whole, with the exception of clinical areas in the medical and dental schools. At the school of dentistry, masks are also required in preclinical labs (sim clinics). "Social distancing," and the concomitant dividing up of classes into groups meeting in different areas of the building or at different times of the day, has been rescinded. One change that has persisted is the move of written exams to Examsoft. The School has made it a policy that all written exams will be online.

b. Are your students requesting more videos of procedures post-COVID?
(CU) Yes.
(Creighton) They were requesting videos before covid and we probably have seen the demand remain steady without increasing. We do have a small library of videos for the students to access.
(SIU) Yes.
(UMKC) Not necessarily MORE videos, they have consistently asked for visual aids before and after the pandemic.
(Iowa) YES
(UMN) Not more, about the same.

   i. Do your students access YouTube and similar platforms in lieu of course content? (CU) More Videos were made during COVID and during performing online teaching. Videos are uploaded to Panopto integrated on Canvas. We continue to use those videos after COVID as well.
   Yes, they access YouTube as an additional resource not so much as an alternative to course content. Some instructors provide YouTube video links to the class to augment. There are many high quality videos available (i.e. Stevenson Dental Solutions) that may help a student understand the "how to."
   (SIU) Yes, and I encourage them to share any content that they access, with me, to provide feedback on any pros or cons of the information they are considering.
   (UMKC) That seems to be the case for many students.
   (Iowa) The students' access Youtube videos and other platforms however Iowa provides technique videos of most procedures to them. We don't have videos coming from Youtube that we use for instruction.
   (UMN) Not in lieu of, but some students like to see different ways of doing things so they access YouTube videos in addition to course content.

c. Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?
(CU) Yes, during covid, for preparation of videos and instructions to reduce student contact.
(Creighton) No.
(SIU) No direct correlation.
(UMKC) No.
(Iowa) No.
(UMN) No

d. How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

(CU) We have 43 didactic and 84 simulation clinic hours in the first two years of Dental School. For clinical Operative, we have a total of 6.4 credit hours. This does not include: Dental Anatomy, Cariology, ISTR, Intro to Dentistry, and Esthetic Course.

(Creighton) D1s—4 hours x 16 weeks=64 hours, D2s—7 hours x 32 weeks=224 hours, D3s—1 hour x 32 weeks=32 hours

(SIU) 12 hours.

(UMKC) 3 lecture credit hours (1 hour per week for 3 semesters) and 4 lab credit hours (3 hours per week for 2 semesters). Additionally, there is a Clinical Operative Dentistry Course with typodont and patient requirements and a written test. (36 lecture hours, 72 lab hours)

(Iowa) Dental Anatomy (Fall) – 3 hour
Operative dentistry I – 1 hour (Fall) + 5 hours (Spring)
Operative Dentistry II – 3hours (Fall) + 3hours (Spring)
Operative Dentistry III – 4 hours

(UMN) Preclinic (Operative Dentistry I, II, & III) lecture and lab time = 292 hrs. Operative Clinic is embedded in the Comprehensive Care Clinic where students have 30-hours/week available to them, plus evening clinic time, minus carve-outs for rotations and outreach. How many clinic hours are allocated for Operative procedures cannot be accurately represented since the available time is shared with other disciplines. The amount of time students actually spend doing Operative Dentistry during this clinic time can be roughly estimated from student productivity. The mean number of restorations placed for the Class of 2022 was 99.5 (SD 23.5), assuming a 3-hour appointment, a rough estimate of average clinical time in the curriculum for Operative Dentistry would be about 300 hours.

e. What percentage of your curriculum, if any, is devoted to amalgam instruction?

(CU) We have 10 Didactic and 24 simulation clinic hours devoted to Amalgam. (28% in pre-clinical operative DS1 year).

(Creighton) The percentage of amalgam instruction is diminishing mostly because of improved composite resin products but also because of patient demand, patient preference. Our General Dentistry department receives a monthly report of the top 10 procedures performed each month. Seven of the top ten procedures are anterior and posterior composite resin restoration, single or multiple surface. The other 3 procedures are prophys, comprehensive exams, and periodic exams. This Fall Semester, we are consciously reducing the number of pre-clinical amalgam procedures and introducing other procedures instead, e.g., fiber post and core buildup, more multi-surface preps and restorations.

(SIU) Approximately 20%.
(UMKC) This IS something we are reducing. It is still in the Operative 1 lecture and lab course and used occasionally in clinic. The entire Operative 1 course used to be centered around amalgam, but will soon be 1/3-1/2 amalgam and the rest focusing more on composite. Operative II will include no-minimal amalgam (maybe one pin-retained buildup restoration.)
(Iowa) 20% operative dentistry curriculum.
(UMN) In the preclinical (skill development) courses, sessions are dedicated as follows: Operative I: 18/28; Operative II: 7/21; Operative III: 7/24—for an overall preclinic percentage of 32/73 = 44%. For the clinic, using mean number of restorations placed for the Class of 2022, amalgam restorations constituted 8.3/99.5 = 8%.

VI. Materials and Techniques

a. Zirconia restorations (preparation guidelines, preclinical and clinical use)

(CU) We cover monolithic and layered as well as the 5y and 4y versions on Indirect Single Tooth Restorations and Prosth courses. Preparation guidelines: Generally similar to FGC dimensions (1.5 mm occlusal clearance, Chamfer or Shoulder finish line 0.8 to 1mm). Were we currently cementing with ivoclean treatment of intaglio prior to RMGI (Fuji Plus).
(Creighton) 1.0-1.5mm reduction axially and occlusally.
(SIU) Smooth, continuous, well defined, 360 degree chamfer or rounded shoulder 0.5-1.0mm width, path of insertion within 10 degrees of long axis and not rotated, no undercuts, 6-16 degrees of taper, 1.5mm reduction of occlusal, buccal, palatal walls with secondary planes, rounded line angles and cusps, occlusal anatomy maintained, no damage to adjacent teeth or gingiva.
(UMKC) (PROSTH COVERS THIS) We do more zirconia restorations than PFM at this point in the clinic. Preparation guidelines as recommended by manufacturer (1.0-1.5mm material thickness on walls (0.5mm MININUM), 1.5-2.0mm on functional cusp). We do both milled in house and lab fabricated. Students are required to mill one crown (zirconia or Lithium Disilicate). We do teach inlay and onlay PREPS in one lab period.
(Iowa) it is taught in the D4 year in the clinic. In addition, it is covered didactically in prosthodontics + operative dentistry, regarding mostly indications and materials properties.
(UMN) At our institution, this is part of the Prosthodontic Divisions curriculum.

b. Do you teach bulk fill technique?

(CU) We cover bulk Fill only during Operative lectures and only use the bulk fill technique for the core build-ups in the patient clinic.

(Creighton) Our dental research lab consistently finds cure depths of 3-4mm regardless of what the CR product claims in its packaging; so, we teach increments of 3-4mm.
(SIU) Yes and no, we use a bulk fill composite as a base for composite restorations but not at the thickness that manufacturers recommend…only 2mm increments.
(UMKC) No.
(Iowa) YES.
(UMN) We teach about the material in didactic instruction, but do not utilize it in the lab or clinic.

i. If so, what products do you use? Cosmecore (Cosmodent) for core build-ups. NA. Surfill SDR flowable. N/a. Filtek One Bulk Fill Restorative (3M Oral Care)

c. Do you teach the Bioclear method?
(CU) No.
(Creighton) We will be introducing the Bioclear method to the D3 students as a newer technique, so they have awareness. We will possibly look at obtaining some of the anterior matrices to assist with restorative in the clinic, but as of now, there is only a lecture planned.
(SIU) No, have used some in clinic but never integrated into curriculum.
(UMKC) No.
(Iowa) No.

i. If yes, is it part of the curriculum or main track operative? No. No. n/a.

(UMN) The faculty were taught, but it is not part of the predoc curriculum.

d. Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.
(CU) No.
(Creighton) Our student involvement in research is just starting to bounce back following covid. Research was one of the areas that was neglected while we were dealing with compromised classroom, lab, and clinic environments, while still trying to advance students through the curriculum.
(SIU) Currently only if the student pursues research interested where it would be utilized, but, there are plans to integrate it into a foundational course.
(UMKC) No.
(Iowa) YES. D1 students participate in an activity to prepare samples for shear bond strength testing. Each student bonds two samples, one dentin sample (extracted teeth) bonded following the appropriate manufacturer's recommendation and technique, and another sample bonded not following the procedure correctly. The bond strength numbers obtained using the Ultradent

shear tester for each student are compared and a final report with all the numbers is shared with the D1 class in the next session.
(UMN) The students do not have hands-on exposure to the Ultradent Shear Bond test apparatus specifically. They are exposed though to shear stress as one of the types of stress materials are exposed to.

e. How do you teach post and core?
(CU) All traditional methods are covered in lectures during prosthodontic courses and endodontic courses, but the use of posts is very limited in our simulation clinic and clinic. There is one exercise in transition clinic on extracted teeth for cast post and core, students even take impression for cast post and core.
(Creighton) We are currently working on a lab exercise in the second semester with our D2 operative students. They will use a tooth they have obturated earlier in the semester in endo lab. We will simulate a fracture of a cusp and then proceed with a post and core buildup using the FiberPost system from Ultradent. Funding has been an issue for making this lab a reality. We do teach the Fiber posts in clinic, but basically on the spot, one at a time.
(SIU) For a cast post and core the students use the Accadental modular dentoform simulated tooth with gutta purcha. For a non-cast post and core the students use a human molar to place a Parapost and perform an amalgam build up.
(UMKC) Part of Fixed Prosth 2
(Iowa) Prosthodontics is responsible for teaching post+core, they use extracted teeth for it (still teaching an acrylic pattern.)
(UMN) At our institution, this is part of the Prosthodontic Divisions curriculum.

i. Human teeth or simulated, (i.e. Accidental or Frasaco)? One exercise on extracted teeth.
Extracted tooth. Required 1 completion, ideally on patient, but concessions have been made in the past where it has been completed on extracted tooth for D4 students who had not met the requirements. Primarily prefab.

f. Are you doing more traditional impressions than scans?
(CU) We are doing a lot of digital impressions, but we are still doing more traditional than digital for now. We currently have 5 scanners available to students in the clinic (1 Trios2, 3 Trios3, and 1 Trios4).
(Creighton) Up until this Spring 2022, we have been very active in the clinic with CEREC; however, the ongoing lack of support from Dentsply on maintenance and software upgrades has forced us to discontinue our relationship with CEREC and we are currently evaluating other systems, more specifically Planmeca.
(SIU) No, 75% still traditional impressions, not enough scanners to do more.

(UMKC) Yes, but the gap is narrowing.
(Iowa) YES. We currently don't have enough equipment and faculty/staff training. But the college is working on expanding the digital curriculum, training and equipment.
(UMN) Operative Dentistry is part of the Digital Dentistry Working Group which is tasked by Dean Mays with developing and implementing a comprehensive plan for the enhancement of digital dentistry across all four years of the pre-doctoral DDS curriculum. Although both modalities will still be taught, the initiative should result in a shift away from traditional impression techniques.

g. Are you clinically scanning and milling on the same day?
(CU) We are not milling the same day, but about 20% of our single crowns are milled in-house.
(Creighton) Up until this Spring 2022.
(SIU) Not allowed to scan and cement in same appointment, however, can book morning and afternoon appointment to complete procedure in one day if acceptable to covering faculty and appropriate for patient care.
(UMKC) Yes. One is required for graduation (NOT same day).
(Iowa) We try to do it on the same day. However, sometimes it doesn't happen due to technical issues or if the CDT help is not available.
(UMN) Only in an elective course, but the recommendation of the Digital Dentistry Working Group is to teach the same day restoration in the main preclinical Operative Dentistry sequence (Op Dent II & III courses).

   i. Do you have a dedicated faculty/digital technician? Faculty yes, technician no. Yes. No, select faculty with greater experience and comfort level using the equipment proctor students within their teams or across teams as needed. Some faculty are well-trained, more are learning. (But not officially dedicated.) Yes, we have 2 CDT experts for the comprehensive care clinic (D4). For clerkship (D3 year) their help depends on the availability. We have a dedicated IT person already in place. The dedicated lab technician is being sought.

h. Do you teach margin elevation?
(CU) No, for indirect restorations. Yes, for direct restorations.
(Creighton) Attached is a published article on literature review of Deep Margin Elevation (DEM), which is distinguished from sandwich technique. At the one-day faculty retreat, when asked about published clinical studies in this area, Mark Latta said that the studies are limited, and the results are marginal especially when compared to amalgam. Mark emphasized that if a patient insists upon it, traditional glass ionomer is better than the resin-modified glass ionomer.
This will be introduced to the D3s through lecture—again mostly for awareness and best practices, but not necessarily as a common clinical procedure.

(SIU) No, no margin elevation is allowed, or taught.
(UMKC) No.
(Iowa) YES, the technique and materials used for that are presented to D2 students in a didactic lecture.
(UMN) No. We are planning to add the technique to the didactic portion of Operative III, without a laboratory exercise.

i. If so, What material do you use? RMGI (Fuji II LC)+ Composite. RMGI or GI. Tofflemire bands may be adapted (shortened in an occl-ging direction) to buildup up a portion of the gingival seat and then transition of a sectional matrix to enable a better contour when a deep gingival seat presents itself and the patient refuses silver amalgam. Students are encouraged to use resin composite or resin modified glass ionomers for this technique in the clinic.

i. In your school are micro-etchers introduced?
(CU) No.
(Creighton) Yes
(SIU) No. (question if this is referring to microabrasion rather than micro-"etchers. In group discussion determined the question would be references the Prophy jet)
(UMKC) No.
(Iowa) Yes. Air abrasion with alumina 50 µm and CoJet Silicate Ceramic Surface Treatment system (aluminum oxide 30 µm modified with silica) are both available in Operative Dentistry clinics.

i. If Yes - for which procedures? Composite resin veneers, repair of existing large composites (i.e. patchwork on an elderly patient). Intraoral repair of dental composites, amalgam, porcelain, and other metal substrates (PFM for example). (UMN) They are used to imitate acid etching of plastic teeth in the simulation clinics. In the didactic portion of Operative Dentistry III, micro-etchers are recommended for the exposed metal of a fractured porcelain-fused-to-metal (PFM) crown as a step before placing the composite to repair the fractured area.

j. In your school are the pre-clin students introduced to working on natural teeth?
(CU) Yes.
(Creighton) Yes. But it is minimal, and teeth are presterilized.
(SIU) Yes, extracted teeth.
(UMKC) Yes- primarily in endo lab. One exercise just added to Operative II lab-caries removal.
(Iowa) Yes, one exercise on sealants and one on caries management.
(UMN) Yes

i. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?

(CU) We have one Operative course on extracted teeth for second year dental students. We perform caries removal (including selective caries removal), dental bonding, glass ionomer placement, and PRR/Sealant. Extracted teeth are also used in Endodontic courses and in Transition Clinic for students to practice. The teeth are cleaned and stored according to the following:

Dr. Carey's laboratory (the Caries Research Lab) has received the approval and authorization from the University of Colorado Denver/Anschutz Institutional Biosafety Committee to collect and use human teeth and saliva for use in the laboratory. The proper containers labeled as Biohazard material will be provided by the Caries Research Laboratory (Dr. Carey). The tooth storage solution will be prepared as follows:

i. 25% Ethanol
ii. 75% water
iii. 200 mg Finely powdered hydroxyapatite
iv. 20 mg sodium azide (anti-microbial)
v. 40 mg thymol (anti-fungal)
vi. Stir for 24 hours

(Creighton) Deep caries removal exercises in D2 oper lab.

(SIU) Variety of procedures; required to fulfill categories of…for example, a complex amalgam, anterior esthetic composite, deep caries with pulp cap, conservative composite, etc. Teeth are sterilized by soaking in formalin solution for 2 weeks.

(UMKC) Endo lab, post and core (fixed lab), bleach, glycerin, water solution.

(Iowa) They are cold sterilized using chemicals.

(UMN) Caries Removal, pin placement, root caries restoration.
Teeth are collected from local practices in supplied formalin-containing jars. At the School of Dentistry, the formalin is replaced with formalternate.

k. Which generation bonding agents are you using?

(CU) 4th generation, 3 step bonding system (OptiBond FL).

(Creighton) Prime & Bond NT. In 2021,the General Dentistry department worked up a proposal for Clearfil SE Bond 2, and it was approved than got bogged down on refrigeration as the instructions say to store the material between 35°-45° F. It's been tabled.

(SIU) 5th generation. Etch, rinse, prime and bond. Appreciated the point made in discussion by colleague that bonding agent "generations" is a manufacturer

generated terminology, not academic, and therefore lacks clarity. Defining steps works as a better method of communicating the type of bonding agent.
(UMKC) Primarily Universal adhesives (Adhese vivapen ivoclar).
(Iowa) 4th generation for most direct restorations (Optibond FL, Kerr), and 6-8th generation for indirect restorations (Tooth primer used in combination with the Panavia V5 resin cement, Kuraray; All Bond 3 used with Duo-Link resin cement, Bisco).
(UMN) Scotchbond Universal Adhesive.

l. What is your success rate with composite restorations at your institution?
(CU) We have not done statistics at this stage.
(Creighton) 97%
(SIU) Unable to obtain definitive statistics at this time, estimated at "high success rate" based on anecdotal observation of "adverse outcome"/"fee adjustment" reports observed by department chair.
(UMKC) 98% over 7 years failure rate according to our completed procedures vs fee waiver forms. I do not think this number is accurate.
(Iowa) Immediate failure of composite restorations is rare, and we are currently conducting a retrospective study investigating the failure rate of such restorations, but we do not yet have the results. All of our students eventually pass the assessments for composite restorations, both anterior and posterior, as that is a central part of the D3 clinical course.
(UMN) Success rate can be interpreted as having reasonable longevity. Longevity studies suggest composite restorations last on average only 6-8 years. We would hope for 10-20 years. Because we are a teaching institution, there are some errors in placement that occur—these usually present themselves as early failures (1-2 years)—and these are generally attributable to poor field control or inadequate light curing. Another measure of restoration success is the lack of post operative sensitivity. Clinical studies indicate up to 30% of posterior composite restorations show signs of post operative discomfort [ALF Briso, et al. Op Dent 2007; 32:421-6.]. It is difficult to measure the rate of early failures and post operative sensitivity, but my sense is that the rate in the predoc clinics is not much different than that experienced in private practice.

m. How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?
(CU) Students are expected to complete Phase I of treatment (direct restorations and periodontal treatment) with every patient before moving to phase II. After completing the proposed Phase I treatments, students are expected to bring patients for completion of the Phase I Axium code, which includes a new periodic exam. At that time, they are expected to evaluate their own work, new needs

and confirm or plan the phase II treatment. To ensure and keep track of these, every semester as part of their Comp Care grade, students are also required to submit documents for their patients including Chart Audits, Phase I complete and case complete. For those submissions, students are expected to perform a periodic exam to evaluate their own work.
(Creighton) not answered.
(SIU) Phase I treatment (disease control) is followed by a treatment sequence review prior to moving on to secondary phase, fixed/removable. The treatment sequence review process requires mounted models with approval from each discipline (operative, perio, fixed, removable) prior to progression.
(UMKC) (Phase 1= Disease control?) Students are required to go through Treatment Planning with select faculty during specific times. Students sign up for a time slot and meet one on one with the treatment planning faculty to present their proposed plan, then discuss it with the treatment planning faculty member. Treatment plans are divided into disease control and definitive when necessary (ie, the patient has SRP and/or several carious lesions AND needs fixed and/or removable prosth work that may depend on the disease control phase. If the treatment plan is more straight forward, ie a composite restoration and a single crown, the treatment may all be on one plan.
(Iowa) The college follows the modern philosophy of caries management. Depending on the extent of the lesion, the students have to do complete or selective caries removal. This step is checked by the supervising faculty before students place the restorative material. Failure to get this step checked off results in an automatic failure.
(UMN) Color Group Leaders supervise patient care, insuring timely treatment and completion of treatment plans.

n. Does your school have a separate clinical discipline managing the non-operative treatment phase?
(CU) No, we have comprehensive patient care clinics, but we do have separate competency examinations for Caries Risk Assessment and Caries Risk Re-assessment.
(Creighton) In May 2022, we launched a Team Clinic model, where Oral Diagnosis, Operative, Perio, and some Fixed are performed in the teams with both junior and senior students. Pediatric Dentistry, Endo, Oral Surgery, Removable Pros, and much Fixed are done outside of the team setting.
(SIU) All treatment is managed through the team system in which the team leader and its co-leader coordinate care for each patient, insure students are allowed adequate exposure to necessary procedures and instruction is given by the qualified faculty within the team. Pedodontics, periodontics, endodontics, oral surgery, orthodontics are mostly covered by specialists within the discipline rather than faculty within the team.

(UMKC) No, we have a comprehensive care clinic rather than departmental. Non-surgical treatment is being taught in multiple courses (primarily Operative courses, but also touched on in Patient Care and Biochemistry.)
(Iowa) We have the clerkship system in the D3 year, and the non-operative treatment is completed by the students under specialists' supervision in the respective departments. For the comprehensive care in the D4 year, students have to schedule non-operative treatment phase with the designated specialist when they are covering the clinic.
(UMN) Color Group Leaders are members of the Comprehensive Care Division within the Primary Care Department. The Operative Dentistry Division is within the Restorative Sciences Department.

VII. Student Assessment

a. How to address students with anxiety and overcoming failures.

(CU) We do refer to the campus resources to help. We have CU Anschutz Student Outreach and Support Office.
(Creighton) Students work with our Office of Student Affairs, our chaplain or the instructors to address concerns. We also have an Ignatian Mindfulness Program and other wellness opportunities on campus.
(SIU) The Student Progress and Awards Committee (SPAC) evaluates failures on a regular basis (at each 9 week interval) and reaches out to any at risk students offering counseling and tutors, and requests their action in meeting with course directors and faculty advisors.
(UMKC) We have a student support staff member who is available to meet with students regularly. A student can choose to set up meetings with this staff member or may be required to as part of a learning plan.
(Iowa) Following resources are available for students –

- College has an on-site Counsellor for students
- There are accommodations available for students (private room for exams, extra time, scratch paper, video recordings of the lectures, etc.)
- There are tutors to help with feedback after hours if students need extra help.

(UMN) The School of Dentistry is fortunate to have an Assistant Dean for Resident and Student Affairs (Sara Johnson) who works closely with students experiencing personal or health issues that are impacting their educational experience.
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b. How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?

(CU) Students are expected to follow the academy honor code when working outside class time. In most of the preclinical courses, no formal grade is assigned

to daily projects, students perform self-evaluation and faculty provide feedback on areas they need to improve. A small amount of points is given considering the date of completion and not the performance level. The project evaluation is made during course time, and exceptions are made by course directors only. The graded projects and practical exams are done during lab hours, on marked exam teeth and they are retained for grading.
(Creighton) Students either do not keep their projects or are required to get starting checks from instructors. Students for D2 operative lab are also not allowed to work on operative projects outside of supervised lab hours. The students actually like this as they are not required to do lab homework outside of class time.
(SIU) As students' progress in pre-clinical operative courses, more work is required to be completed in class. Practicals are heavily weighted and make up the majority of the grade.
(UMKC) This is a challenge. We primarily use the honor system and the daily work is worth less overall than the Practical exams. We have more of an issue with students "table topping" instead of working in their manikins.
(Iowa) For the practical exercises – we provide them with marked teeth so they can't use teeth that have been passed down.
For daily exercises, we rely on student's professionalism and commitment to learn and practice. We have tried to collect teeth back after the semester is completed but it is difficult to keep, track and dispose them.
(UMN) Supervising faculty remain with a cohort of students for a substantial period of time allowing them to develop familiarity with each student's level of proficiency. Students also have an honor code.

c. How many Mock Board sessions are you performing?
(CU) None.
(Creighton) Four days. Mock boards will mimic actual ADEX boards as closely as possible. Two days will be used for Endo/Pros (3 hours endo/3-4 hours pros) and two days for Operative (seven hours total for two operative procedures). The senior students will be split in half to accomplish this. Perio will not be participating in mock boards as they will handle their own mocks in a clinical situation, which they also use as a senior clinical competency. Students will have access to a perio manikin model for awareness only.
(SIU) 2
(UMKC) We have one mock board manikin exam in winter. Three of our competencies mimic this as well. There is also a written mock INBDE in early summer.
(Iowa) We are doing a mock restorative exam this year in Feb for the D4 class. Endo will also be doing practice sessions for the Endo portion of the Endo/Pros exam as part of the D2 endo lab course.

(UMN) One

d. Is your state/region permitting or considering the DLOSCE for licensure?
   (CU) Accepts DLOSCE as well as Canadian OSCE.
   (Creighton) No.
   (SIU) Not that I am aware.
   (UMKC) No.
   (Iowa) Iowa does not accept the DLOSCE alone in the IDB rules, however it has been accepted through a waiver in conjunction with the Endo/Pros manikin exam.
   (UMN) The MN Board still recognizes the NDBE (the Canadian Board OSCE exam). But for the DDS Class of 2022, all students took CDCA instead.

e. For regional licensure exams, are you opting for live or simulated examinations?
   (CU) Simulated.
   (Creighton) Both are offered and depending upon the student's state requirements, they opt for what they need. It's mostly been manikin.
   (SIU) Simulation examinations.
   (UMKC) We have been doing simulated examinations the past two years.
   (Iowa) We have a hybrid approach given that there are still states only accepting the patient exam and not the manikin exam. For us, the Feb. ADEX exam will only be restorative Manikin and the March exam date will be hybrid – patient and manikin retake.
   (UMN) Students have the option of taking one or the other. Some students take the live-patient exam because of the state's requirements where they want to practice.

   i. Do you use prefabricated carious teeth for simulated exams? Yes. Yes, Acadental. Yes. Yes. We have also introduced the simulated caries teeth into our curriculum starting the D2 year. Yes, we purchase teeth from AcaDental which are the same as the CDCA CompeDont manikin restorative exam. Yes, but simulated caries material is not a good match for the real thing.

VIII. Administration

a. How do you recruit adjunct faculty?
   (CU) We do not have an official process for recruiting adjunct faculty.
   (Creighton) Personal networking.
   (SIU) No official recruitment policy.
   (UMKC) Full-time faculty retire and we ask them to come back once a week.
   (Iowa) We have had a steady number of adjunct faculty over the years. Most of the time recruitment comes from the adjunct faculty interest in given back to the

school (alumni). Most of them are currently in private practice in towns near by the college.
(UMN) Recruitment advertisement on University Website. Adjunct faculty interviews by *Northwest Dentistry* (Journal of the Minnesota Dental Association) encourages colleagues to consider teaching in retirement. Most hires, however, tend to come as referrals from the network of existing adjunct faculty.

b. How do you calibrate/align faculty?
(CU) Formal calibration sessions, attendance, pre and post questions.
(Creighton) Quarterly CE offerings, assignment in the pre-clinical labs.
(SIU) Each section performs a one hour calibration session for faculty on grading and rubrics in the fall semester. In the spring semester, each section provides one hour of calibration to students entering the clinic and to faculty on protocol and competencies.
(UMKC) We have monthly faculty meetings with entire Restorative Department to review various topics relevant to our department. For preclinical courses, lab course directors meet with the faculty in their lab prior to the start of the semester. Many labs have additional calibration meetings with preps/restorations or wax ups to review along with grading criteria. For operative, we have switched to an assembly line style where one faculty member grades one area.
(Iowa) Before the academic year begins, we have a one-day teaching in service for clinical calibration. In addition, calibration occurs indirectly in the clinic as 2 faculty are assigned to the clinic floor, and often discuss student's performance. For pre-clinical courses we also calibrate instructor once a year using vignettes/ top hat (responder system)
(UMN) There are conceptually two different types of standardization that we are concerned about in terms of the teaching of clinical faculty. First, the level of agreement between instructors—which is related to the goal of uniformity and fairness in grading. The second is level of agreement with a gold standard—in this case the concepts taught the students in the preclinical courses. To serve these goals, exercises are periodically employed for all clinical and preclinical faculty that involve (1) a baseline faculty evaluation experience, (2) evaluator training to decrease variability, and (3) a second (post-training) evaluation experience. In the preclinical courses, bench instructors meet for half an hour before each lab session to be standardized. The course director presents the scheduled project, the grading rubric, and examples of work from previous classes to illustrate various levels of quality, the possible causes and solutions for errors, and the recommended evaluation level. Many faculty teach both in preclinic and clinic. New hires, when possible, are rotated through the preclinical courses.

c. How do you monitor and manage student learner requests for excused absences related to COVID-19?

(CU) The campus requires self reporting and they manage students being allowed back on campus. We (the dental school) do not manage COVID absence, happens at the Campus level.

(Creighton) All absences are managed at the Associate Dean for Student Affairs level.

(SIU) Currently no action is taken to address this concern as it has not been a consistent problem. Most students are eager to return to class due to stress of falling behind when absent and potential for loss of progress associated with the lost time.

(UMKC) I haven't had this happen nor heard of others having this issue. Single absences, absolutely, and they are accommodated with a later exam date.

(Iowa) Students report absences to the Office for Student Affairs. If tested positive, students should be out for 5 days, and need to come back after that if symptoms improve (follow CDC guidelines)

Students can request sick days, but this does not seem to be an issue for our institution.

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) Unaware of such incidents. Whether a student's absence is excused or not is determined by the Office of Student & Resident Affairs. Once the absence is excused, school policy requires accommodations are made.

ii. How do you manage these missed assessments? Preview of the course director. These are made up when the student is back in attendance, usually as a great inconvenience to faculty and staff, with no assistance from the Student Affairs office. Accommodate the student as well as possible with direct communication and scheduling between the course directors and students. For practical assessments, we give the student a later exam date with no additional hassle. For lecture-style assessments, the students complete the exam with support staff. It depends on the course director, but the exam may be modified slightly. Assessments can be rescheduled depending on syllabus policy. Although students with excused absences must be given the opportunity to take missed exams, they do not necessarily have to take the identical exam to the one they missed. If there is concern about abuse of the absence policy, it is possible to require an oral exam as the replacement.

d. What opportunities does your institution provide to help develop junior operative faculty?

(CU) We are a comp care oriented group; therefore, do not separate out operative trained faculty with the exception of placing them in appropriate course directorships.
(Creighton) Each department has annual Faculty Development funds that allow for attendance at local or national meetings as well as enrollment in ADEA or other leadership courses, etc.
(SIU) Full time tenure track faculty are provided a mentor, start-up funds, and research time.
(UMKC) Our clinic is comprehensive, so there is a lot of cross training. Operative is under the umbrella of Restorative Clinical Sciences, so our faculty works on most of what we're comfortable with in clinic. Operative faculty will work in the preclinical labs. They can eventually become course directors in Operative, Morphology courses and administrative roles in clinic (Team Coordinator, Practice Coordinator, asst clinic dean.) Pedodontics, oral surgery, and endodontics are in separate clinics.
(Iowa) Depending on the junior's faculty interest, we have internal funding opportunities that are more clinically oriented, and we partner junior faculty with a research mentor. We also provide financial support and time for faculty to pursue further training (become a fellow of AGD). In addition, during annual exchange with department chair, faculty discuss their future plans and trajectory.
(UMN) For about two years now the School of Dentistry has had a very active Assistant Dean for Faculty Development, Christine M. Blue, DHSc. She has developed a peer observation program, has organized many continuing education programs about teaching, and provided links to other campus resources to enhance teaching and assist with pursuing promotion and tenure. The Bush Early Career Faculty Development Program, offered at the University level Office of Human Resources, covers such topics as creating teaching portfolios, tools for improving teaching, balancing teaching and research, and issues related to evaluation and grading. Full time Operative faculty are encouraged to attend dental meetings, like the Academy of Operative Dentistry, American Dental Education Association, and IADR/AADOCR, and expenses are covered by the School.

i. What academic/administrative career trajectories do Operative trained faculty typically pursue?
   (CU) Course directorship is common – none to date have moved up to administration but certainly could if interested.
   (Creighton) Historically, operative trained faculty have pursued and gained General Dentistry Chair positions and Dean/Associate Dean positions as well.

(SIU) No set path but past operative instructors have gone on to positions such as director of community dentistry, clinic dean, associate dean at another school and a recent past dean was originally an operative instructor at another school.
(UMKC) University of Missouri has a Faculty Scholars program that is more of a general program about advancement in academia. I received a scholarship to go to ADEA's Institute for Teaching and Learning my first year, some faculty are attending the ADEA leadership program.
(Iowa) This varies depending on the faculty interest. Some faculty pursue directorship of a certificate/residency program, chair's position, director of curriculum/assessment or admissions, different committee's chair position (both institutionally and nationally ADA, AOD, ACC, ADEA, ADM, etc).
(UMN) Division Director, Assistant Dean.

Region III

2022 National Agenda

I. Curriculum

a. Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?

Houston
Changes were maintained until summer 2022. Exception in the Fall was that course directors of preclinical courses were given the option of having students all together in lab or split cohorts. Many course directors chose to split cohorts in lab.

Mississippi
No

LSU
No

Oklahoma
The curriculum and schedules largely returned to pre-covid norms.

Tennessee
Seemed to have gone back to pre-COVID protocols.

b. Are your students requesting more videos of procedures post-COVID?

Houston
Frequency is about the same.

Mississippi
No

LSU
No

Oklahoma

Tennessee
The students didn't specifically "ask" for more videos, but more were presented in lecture/lab (from very specific/vetted sites). Example – Stevenson Dental Solutions

i. Do your students access YouTube and similar platforms in lieu of course content?

Houston
Yes

Mississippi
They do have access!

LSU
Yes… Op Dent 1 has YouTube content for the course. Op Dent 3 has videos available via One drive links.

Oklahoma
Yes, students have requested more videos as well as watch YouTube for preclinical help. This can conflict with our expectations and rubrics for a given procedure.

Tennessee
The access YouTube videos in conjunction with the course content (not really in lieu of)

c. Has the introduction of new content (e.g. Telehealth, etc.) affected the amount of time devoted to operative dentistry instruction?

Houston
Operative time allotment is the same

Mississippi
No

LSU
No

Oklahoma
We have returned to normal clinical schedules from pre-covid for clinical operative procedures/instruction. The preclinical courses have had an increase in lab time with pre-recorded lectures for the students to review prior to lab.

Tennessee
The time devoted to Operative appears to be about the same

d. How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?

Houston
Preclinical: 17 weeks per semester meeting 10 hours/week, 2 semesters (Operative I and II); that makes 340 hours total for preclinical operative. Clinical: 459 hrs in the Fall (3hrs x 9 sessions x 17wks) plus 510 hrs in the Spring (3hrs x 10 sessions x 17 wks)

Mississippi
316 for first two years, 3 courses, with lab and lecture

LSU
Greater than 451 hours

Oklahoma
Spring: 8 Hrs/Wk for OP I Preclinic; 6 Hrs/Wk for OP 1 Clinic; 15 Hrs/Wk for OP II Clinic. Summer: 4Hrs/Wk for OP II Preclinic; 15 Hrs/Wk for OP II Clinic. Fall: 4Hrs/Wk for OP II Preclinic; 15 Hrs/Wk for OP II Clinic.

Tennessee
Is this based upon "semester hours" or the actual number of hours spent in labs/lectures/clinics? 40 hours/week for clinic; Operative I – 4 hours/week for 22 weeks; Operative II – 4 hours/week for 29 weeks; Operative III – 4 hours/week for 17 weeks; Operative IV – 4 hours/week for 7 weeks; Advanced Operative – 5 hours.

e. What percentage of your curriculum, if any, is devoted to amalgam instruction?

Houston
Operative I: 50% and Operative II: 30%

Mississippi
probably 30 hours

LSU
At least 33-45%

Oklahoma
Around 30% of the projects/curriculum involve amalgam (15/47 OP I; 4/19 OP II)

Tennessee
We currently devote several labs/lectures concentrating on amalgam preparation/amalgam restorations (about 100% of Operative I and 50% of Operative II). The remaining 50% of Operative II is composite and CAD/CAM. Operative III is approximately 20% amalgam.

II. Materials and Techniques

a. Zirconia restorations (preparation guidelines, preclinical and clinical use)

Houston
taught in Indirect Single Unit course and Digital dentistry course.

Mississippi

LSU
Prosthodontic Department handles this in their D2 and D3 Preclinical and Clinical courses

Oklahoma
This is discussed in the FPD preclinical and clinical courses.

Tennessee
All Zirconia cases are sent to the lab – currently, we do not mill in house. We are looking at setting up machines for in house milling and expanding our stock with some of the more esthetic Zr blocks.

Pre-clinically, the students are exposed to the manufacturer's recommendation/protocols for their materials. I still caution some of the newer protocols advocating "feather margins" until more clinical studies are done.

b. Do you teach bulk fill technique?

Houston
We introduce it and we give one lab devoted to bulk fill.

Mississippi
No

LSU
Discussing this, but not in Operative curriculum…..Yet.

Oklahoma
Not in any of didactic or preclinical sessions, students may work with a faculty member in the clinic that prefers to restore with a bulk fill and will receive instruction directly from that individual

Tennessee
I have lectured several times on the theory and clinical aspects of the materials; but the student's balk at the added expense of the materials if we add anything to their Dental Student Kits. I also would have to submit a request to a materials/instruments committee to get the bulk fills on the clinic floor.

i. If so, what products do you use?

Houston
Surefill

Mississippi

LSU

Oklahoma

Tennessee
My preference right now would be for a dual cure bulk fill like BulkEZ.

c. Do you teach the Bioclear method?

Houston
No

Mississippi
No

LSU
No

Oklahoma
No

Tennessee

i. If yes, is it part of the curriculum or main track operative?

Tennessee
Again, I cover this in the didactic portion of the D1 l Operative II and Operative III as one approach to the Class II and anterior esthetic restorations. I am a little leery of the "infinity" margin with the restorations approach – I can see this leading to overhangs and a lot of excess material at the margins.

d. Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus?

Houston
No

Mississippi
Yes

LSU
No

Oklahoma
No

Tennessee
They are exposed to the Ultradent testing apparatus and it is compared to other methods of testing – but we do not have an apparatus for them to use.

e. How do you teach post and core?

Houston
We leave that to the prosthodontist faculty.

Mississippi
Usually in clinic, not preclinical

LSU
Operative/Pros/Endo have approved and present a post and core lecture in D3 year

Oklahoma
Posts are not covered by Operative. Core build ups are part of our preclinic,

mostly in our simulated patient sessions and our pin-retained bonded amalgam projects.

Tennessee
Post and cores are taught by both the Operative Department and the Endo Department here – I have never seen this type of set up before. I would assume that Operative/Restorative would handle this. I provide lectures on treating the endodontically treated tooth providing insight form the Operative, Endo and Pros perspective.

i. Human teeth or simulated, (i.e. Accidental or Frasaco)?

Houston

Mississippi

LSU
Fracasco

Oklahoma
They are on natural and typodont teeth.

Tennessee
Endo uses the Acadental teeth.

f. Are you doing more traditional impressions than scans?

Houston
Yes, but there is push to change that. Our goal is 80 % digital.

Mississippi
Yes

LSU
We emphasize traditional impression and scan requirements.

Oklahoma
Currently, impressions occur more often in clinic, but scanning has increased rapidly from even a year ago.

Tennessee
We are doing both. We want the students to successfully competed 5 traditional

impressions before the attempt a digital scan. Why? Because we want them to mater the preparation stage, and the proper isolation needed to obtain any type of successful impression.

g. Are you clinically scanning and milling on the same day?

Houston
Limited clinical cases. Students still have a one-day dentistry manikin practical exam in the 4th year.

Mississippi
No

LSU
Possible only in D4 year depending on patient, material choice, and faculty mentor.

Oklahoma
Not regularly, but it can done. Majority of scans are sent to outside lab.

Tennessee
We are trying to accomplish the scanning and milling on the same day. Sometimes this is not possible, especially when students are attempting this for the first time.

i. Do you have a dedicated faculty/digital technician?

Houston
Yes and Yes, faculty is out digital director

Mississippi
Yes

LSU
Too few faculty to be "dedicated" to only digital dentistry. We do have a number of faculty and digital technicians.

Oklahoma
No

Tennessee
We have dedicated faculty for this, but we are limited in the number that

are proficient in the digital workflow. What I also see as an issue with this is that oftentimes to expedite the process the faculty essentially "takes over" the case. The cases we have for the patient population we see are very difficult and many times the D3/D4 students is not experienced enough for this lever of difficulty.

Main issues:
1. Poor preps and/or isolation
2. Unfamiliarity with the scanner/software – students either unable or choose not to practice prior to attempting this type of procedure.

h. Do you teach margin elevation?

Houston
Not routinely taught and not part of our core curriculum.

Mississippi
No

LSU
Students are exposed to the concept in Pros… it's faculty driven in clinic.

Oklahoma
No

Tennessee
I present lectures on margin elevation and present cases to the students in their D1 and D2 years. The difficulty with obtaining acceptance of this procedure especially with the "older" faculty as there are very few clinical trials. The difficulty again with our patient base (high caries rick, poor oral hygiene, low compliance) is obtaining adequate isolation to even attempt a margin elevation.

i. If so, What material do you use?

Houston
Depends upon faculty clinical judgement.

Mississippi

LSU
Amalgam/RMGI/GI … Faculty choice

Oklahoma

Tennessee
I prefer Glass Ionomer and I often use Greater Curvature bands

i. In your school are micro-etchers introduced?

Houston
No

Mississippi
No, deferred to lab

LSU
Yes

Oklahoma
No

Tennessee
They are introduced in lectures but are very limited on the clinic floor.

i. If Yes - for which procedures?

Houston

Mississippi

LSU
PFM crowns, Zirconia crowns, collars of implant crowns, removal of temporary cement

Oklahoma

Tennessee
They are recommended for repairing restorations and as part of the cementation process for some of the ceramic materials.

j. In your school are the pre-clin students introduced to working on natural teeth?

Houston
Yes

Mississippi

LSU
Yes

Oklahoma
Yes

Tennessee

i. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?

Houston
Caries removal, sealants, PRR, composites and IRM. Teeth are autoclaved.

Mississippi
For caries control during operative orientation

LSU
Operative, Morphlogy, Diluted Sodium Hypochlorite

Oklahoma
Students turn in two labeled sealed containers (with and w/o amalgam) to central sterilization, teeth without amalgam are sterilized in the autoclave, teeth with amalgam are sterilized for 14 days minimum in formalin solution. Teeth are then placed in labeled containers in sterile water.

Tennessee
For Operative – they mount teeth in stone to practice caries removal and to be exposed to the bonding procedure (specifically the acid etching effect). Sterilized?

k. Which generation bonding agents are you using?

Houston
4th, 5th and 6th

Mississippi
6th

LSU
4th generation (3M Scotchbond Multipurpose Adhesive)

Oklahoma
5th, Optibond Solo Plus

Tennessee
We are using a Universal Bonding Agent (ScotchBond Universal) utilizing the selective etching technique.

l. What is your success rate with composite restorations at your institution?

Houston
Total composites done by class of 2022: 7965
Total number of restorations redone during 2020-2022 timeframe: 1004
This equates to **12%** of restorations being redone for any reason (we looked at the class of 2022 to see the TOTAL number of composite restorations completed by them. Then we ran a report: in the time that the class of 2022 was in clinic (2020-2022), how many patients had fillings replaced that had been done at the school. The reason for replacement can't be determined. These re-dos are not necessarily associated only with the class of 2022, they were just from pre-doctoral program but could have been from the class of 2020, 2021, 2022 or 2023. If other schools are discussing this, it will be important to understand how they got the number they did).

Mississippi
95

LSU
"in the 90s"

Oklahoma
98%

Tennessee
We have had to have an overhaul of the reporting methods for "re-dos" – they essentially were not being reported. If I were to hazard to guess, I would say the success rate is not high enough.

m. How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?

Houston
We leave it to faculty supervision.

Mississippi
Phase one completion is checked off before phase two treatment is started

LSU
Students must have a form checked off and approved by Full-time faculty of different departments before proceeding to the next phase.

Oklahoma
Students with patients that are finished with restorative needs and have provided several recall appointments can case-complete a patient, which involver assessing any additional restorative needs including the work done while a patient in the clinic. If the work is acceptable the patient is assigned to the hygiene student clinic for recall appointments.

Tennessee
Can you be more specific?

n. Does your school have a separate clinical discipline managing the non-operative treatment phase?

Houston
No, but GPDs and FAs manage all treatment phases.

Mississippi
Yes!

LSU
Oral Diagnosis

Oklahoma
Oral Diagnosis will work with students through the initial work up. Operative consults occur once the D0150 has been completed by the faculty. The other divisional care is then treatment planned and covered by that specific division.

Tennessee
Group Leaders of keep track overall of the phasing and implementation of the treatment plan.

III. Student Assessment

a. How to address students with anxiety and overcoming failures?

Houston
We have to wait for them to come to us for help. If they do, we try to talk to them one-on-one and if need be we refer them to UTHealth Counseling.

Mississippi
individual attention

LSU
Provide moral support, mentorship, and professional counseling if necessary.

Oklahoma
Students are encouraged to reach out to course directors if they find themselves stressed or frustrated during the semester. We also make sure students are award of the resources they have on campus to make sure this is handled in a healthy manner.

Tennessee
I often quote Einstein and John Burroughs:

> "Anyone who has never made a mistake has never tried anything new."

> "A man can fail many times, but he isn't a failure until he begins to blame someone else"

I feel I need to caution that we are not trained therapists and we can start down a slippery slope of practicing outside of our area of expertise. I often refer to outside entities that are better prepared to handle these types of issues.

b. How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?

Houston
We have to trust them on daily projects, but we provide marked teeth for practicals.

Mississippi
Procedures are graded and turned in

LSU
Teeth are marked differently each year

Oklahoma
A the start of a project, the student and faculty review the unprepped tooth they will be working on. Most sessions have a 6-7 student/teach ratio so we can observe most of the project. The final graded weight of daily projects is also a total of 10% so there is not must incentive for students to try and inflate that area of the grade.

Tennessee
This is a good question and I guess I would rely upon the honestly of the student. If we can't assume they are not cheating – we are in a world of hurt.

c. How many Mock Board sessions are you performing?

Houston
One

Mississippi
Seniors have a course in that

LSU
3-4 Mock Board sessions

Oklahoma
The school has 1 mock board to simulate the ADEX exam in the Spring of the 4th year. The students must complete 2 competencies in the clinic as DS3's that is handled similar to a licensure exam setting.

Tennessee
Currently we do one session but are re-evaluating what exactly this evolution is accomplishing – especially since this is all now typodont based.

d. Is your state/region permitting or considering the DLOSCE for licensure?

Houston
The TDA board is encouraging the state board to move towards the OSCE.

Mississippi
Yes and no

LSU
No

Oklahoma
Not to our knowledge

Tennessee
Not that I am aware of – and I might add, if implemented I may look for another line of work. I do not believe the DLOSCE is the answer.

e. For regional licensure exams, are you opting for live or simulated examinations?

Houston
At UTSD, they have the option to do manikin or live patient – we instruct them to verify what the state requirements are where they will be practicing since this is driven by individual State Board requirements.

Mississippi

LSU
Simulated

Oklahoma
Simulated for the majority of students, unless they plan to practice in Nevada. (1 student took a live exam last year).

Tennessee
If I had a choice I would opt for a live patient exam, but it seems the State Licensing Boards, and testing agencies dictate what we do.

i. Do you use prefabricated carious teeth for simulated exams?

Houston
Yes

Mississippi
No

LSU
Prefabricated carious teeth (Frasaco)

Oklahoma
The DS4 mock board used simulated caries.

Tennessee
Yes – we currently are testing out the Acadental and Kilgore teeth.

IV. Administration

a. How do you recruit adjunct faculty?

Houston
Administrators go in person to meetings and recruit (volunteer faculty).

Mississippi
difficult

LSU
Posting job opportunities on the web or in our local dental society newsletter

Oklahoma
Primarily we recruit by word of mouth. A few positions we will have a formal search. We post positions with ADEA and recruit with residency programs.

Tennessee
Word of mouth, notices through various Journals and Agencies. We are looking into hiring a head-hunting agency to help with recruiting. I am very particular in that the adjunct faculty be able to sit down and help the student clinically and that their restorative philosophy aligns with the University (essentially mine).

b. How do you calibrate/align faculty?

Houston
Interdepartmental faculty calibration sessions.

Mississippi
In clinic with full time

LSU
We have calibration meetings on a regular basis.

Oklahoma
Grade should come from the items on the session's rubric. We have end of semester meetings to review the rubrics and expectations in order to align the faculty members.

Tennessee
This is the million-dollar question. I would prefer to do more than just run through slides and "calibrate" the faculty. I would also like to have hands-on calibrations where you can truly assess the clinical abilities of your faculty members. Practice what you preach!

c. How do you monitor and manage student learner requests for excused absences related to COVID-19?

Houston
Academic affairs and course directors handle it, case by case basis.

Mississippi
Hasn't been a problem

LSU
All excused absences must be approved by the Associate Dean of Academic Affairs

Oklahoma

Tennessee

i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)

Houston
Case by Case

Mississippi

LSU

Oklahoma
The students must fill out and follow the campus protocol which includes on-site covid tests and several days of quarantine. This is usually enough effort for the students to not want to miss that many days just for one exam.

Tennessee
This would not be accepted as an "excused absence" by the Dean's Office and the student would work with the student as they are expected to make up all lost assignments on their own time.

ii. How do you manage these missed assessments?

Houston
Case by Case

Mississippi
See above

LSU
Generally, the course director and student work together to make up missed assessments.

Oklahoma
The course director and the student will arrange a time for the exam or sills assessment to be made up. We have proctoring services at the library on campus.

Tennessee
See above

d. What opportunities does your institution provide to help develop junior operative faculty?

Houston
Nothing specific for operative but we provide opportunity for all faculty regarding CE, travel, etc. pending budget constraints.

Mississippi
Working with senior members

LSU
Junior Operative faculty are paired with a senior faculty member.

Oklahoma

Tennessee

What academic/administrative career trajectories do operative trained faculty typically pursue?

Houston
Either preclinical track or preclinical/clinical or only clinical. We don't typically get operative trained people here in Houston.

Mississippi
All are the same

LSU
Team Leader, Associate Professor-Clinical

Oklahoma
Operative faculty are encouraged to participate in as many committees or groups at the school and campus level that they would like. The modified title used to hire most new faculty does limit the ability to serve on campus committees. Leadership courses and tracks for advancement are discussed at annual reviews.

Tennessee
I have very few which are pursuing tenure track at the moment. I also am very limited in the number of faculty who have any advanced training in Operative/Preventive/Restorative dentistry. For those that do have advanced training – I advocate challenging for Board Certification (American Board of Operative Dentistry).

In our annual reviews expectations are communicated regarding teaching expectations (pre-clinical and clinical), # of publications, community service/service to dentistry.

Region IV

2022 National Agenda -Summary of Responses

V. Curriculum

a. **Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?**

Summary: Overall, schools have adopted hybrid learning with more recorded lectures. However, many indicated going back to pre-pandemic protocols for clinical sessions.

UIC: Mostly to the didactic sessions, which are hybrid. Mini lectures replaced the big lecture times. 8-9:15 time is reserved for student to meet with faculty. Many lectures are now recorded. Staggered start times for clinical sessions.

Michigan: Hybrid didactic sessions for online lectures (recording). For clinical sessions, there are staggered clinical sessions and evening clinical times.

Western: For the preclinical laboratory courses, the have split the students into 2 groups for more time with students and better calibration. Online lectures are available in advance.

WVU: Faculty meetings in Zoom. In-person lectures were encouraged by the University.

IU: Schedule has returned to more in-person lectures. Prerecording is allowed but cannot be the dominant form of teaching. Clinical sessions are returned to normal, no longer staggered times.

b. **Are your students requesting more videos of procedures post-COVID?**
    i. **Do your students access YouTube and similar platforms in lieu of course content?**

Summary: Schools reported that students are asking for more videos of procedures.

UIC: Students requests more videos, but there are students who don't watch in advance. Students have accessed videos on other platforms.

Michigan: Yes. In the process of making more videos for procedures. Demonstrations are utilized in the laboratories.

Western: Yes. Short videos within the lectures are utilized. Time consuming and tough to have videos with good quality.

WVU: Videos from Sturdevant's textbook. Students prefer the small group demonstrations.

IU: Yes, but time consuming. Garrison videos are recommended online. Small group demonstrations.

c. **Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?**
d. **How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?**

Summary: Overall, schools indicated the introduction of new material has not affected the amount of time devoted to operative dentistry instruction. Also, the total hours allocated varied from each university. Please see individual school report for specifics.

UIC: Mini lectures have opened more time to meet with students prior to preclinical sessions. 16 weeks long for semester. 1.5 hour didactic 3 hours per week.

Michigan: Telehealth with oral pathology in the clinics. 7 operative courses, 15.5 credit hours. Clinical courses 3-hour session in am and 4 hours in pm session. Additionally, evening clinical sessions.

Western: Since the students are split into groups, the courses added more time.

WVU: Tele-dentistry has been included but has not affected the time. 4 credit hours in D1, 8 credit hours in D2 year, 4 credit hours in D3 year.

IU: No Telehealth. D1 year has 3times a week for 4 hours a day. D2 year is more didactic content (more prosthodontics), before D3 year (clinics) summer course to refresh concepts. D3 year an advanced restorative course.

e. **What percentage of your curriculum, if any, is devoted to amalgam instruction?**

Summary: School have reported that teaching amalgams is part of their curriculum however many have adapted clinical experiences due to the increase in use of resins vs. amalgams with clinical patients.

UIC: First module (5 weeks) for amalgam teaching. 2 performance examinations for amalgams in preclinical courses. 90% composites in clinics. Complex restorations are now inlays and onlays.

Michigan: 92% composites in clinics. 10% of curriculum for amalgam instruction. Now starts with resins at the beginning of the preclinical courses.

Western: Focus is on composites, but preparation principles are taught with amalgam concepts. 90% composites.

WVU: Due to patient population with high caries risk, amalgams are common restorations. Amalgam course (4 credit hours) which is 2% of the curriculum. Complex restoration is a clinical competency but does not have to be an amalgam.

IU: D1 course for preclinical course teach about 40% of the course. 90% composites for clinical procedures. We adapted to have an amalgam competency from patient to simulation exam.

VI. Materials and Techniques

a. Zirconia restorations (preparation guidelines, preclinical and clinical use)

Summary: Schools are teaching zirconia restorations within the preclinical courses and as a treatment option for clinical patients. Many schools reported similar guidelines to the preparation and indication for use of the various types of zirconia restorations.

UIC:
For monolithic:
Total axial convergence 4-10°/ wall
Axial reduction 1.25-1.5 mm
Occlusal/ Incisal reduction 1.0-1.5 mm
Finish line width and margin design: Deep chamfer, round shoulder, round internal line angles with a margin width of at least 1mm
Its use should be limited to posterior restorations

For porcelain layered zirconia (PFZ)
Total axial convergence 4-10°/ wall
Axial reduction 1.25-1.5 mm
Occlusal/ Incisal reduction 2.0 mm
Finish line width and margin design: Deep chamfer, round shoulder, round internal line angles with a margin width of at least 1mm
Its use should be limited to anterior restorations.

PFM used for FPDs.

Michigan:
Emax is predominant, zirconia is 2nd, but PFM is still used.

Western: Zirconia in posterior and Emax in anterior.

WVU: Monolithic and PFZ; PFM are still utilized.

IU: Monolithic are taught preclinically and for clinical application; PFM are still utilized.

b. **Do you teach bulk fill technique?**
    i. **If so, what products do you use?**
c. **Do you teach the Bioclear method?**
    i. **If yes, is it part of the curriculum or main track operative**

d. **Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.**

Summary: Many schools reported that bulk fill technique is taught but not encouraged clinically. No schools report using Bioclear method in their predoctoral program. Bond testing is used but for limited for research projects.

UIC: Bulk fill technique is taught but not encouraged clinically. No Bioclear method, No Bond testing.

Michigan: Bulk fill technique is taught preclinical but not used yet in clinic. No Bioclear method. No Bond testing.

Western: Exploring options to use bulk fill in technique for clinics. No Bioclear method, and no bond testing.

WVU: Yes, bulk fill technique (tetra and sonic fill…material) and cures 4mm thick. Bioclear is taught in advanced restorative course and can be used with proper supervision in clinic. Bond testing is used but not used frequently except for research.

IU: No to bulk fill. However, the technique is introduced in advanced restorative course. Bulk fill will be introduced in clinics. Bond testing was utilized but no longer incorporated in preclinical courses.

e. **How do you teach post and core?**
    i. **Human teeth or simulated, (i.e. Accidental or Frasaco)?**

Summary: Most schools report using simulated teeth for teaching post and cores.

UIC: Frasaco for Fixed and Kilgore for operative. Cast and Prefab post – pre-prepped canal steps.

Michigan: Acadental dentoform teeth are used for the Fixed course.

Western: Kilgore RCT and students prepare post space. Prefabricated.

WVU: Natural teeth. Mounted in stone or in a dentoform with impression material. Pre-fabricated posts are taught.

IU: We teach post and cores using simulated teeth - #8 Acadental. The students are taught how to prepare a post space for a cast post and core. Also, the students place a parapost using resin cement and a resin core.

f. **Are you doing more traditional impressions than scans?**
g. **Are you clinically scanning and milling on the same day?**
    i. **Do you have a dedicated faculty/digital technician?**

Summary: Schools reported using more traditional impressions than scans. Most schools do not offer same day restoration and do not have a faculty/digital technician.

UIC: More traditional impressions. Students are required to do 4 digital scans. Few cases on the same day, but do allow for full day appt for same day cases. Training course allows select students complete same day clinics. Specialized clinic in digital dentistry. Faculty (5) are covering the clinic. 1 lab technician – designs the cases. Trios is used.

Michigan: Both traditional and digital impressions are done in clinics. No digital technician. 16 faculty who are teaching same day restorations. 4 scanners and 1 milling machine in clinics. Students are required to complete a digital impression as a competency assessment. No design. Cerec system. 6 preclinical scanners. In note, placed unit number in chart which references to the images.

Western: More traditional is done. No scanning and milling the same day; too much of rushing. Digital tech but also helps with analog methods. Emax

WVU: More traditional impressions. Innovation center – 40% of crowns are scanned and milled. No dedicated digital tech. IT/Security issues is preventing implementation of clinical wide use. Cerec.

IU: More traditional impressions. We have purchased 25 3Shape Trios scanners and plan to implement scanning into the clinical curriculum by Summer 2023. We plan to expand our in-house fabrication as part of a phased approach of our digital plan. We hope to hire a dedicated digital technician.

h. **Do you teach margin elevation?**
    i. **If so, What material do you use?**
i. **In your school are micro-etchers introduced?**
    i. **If Yes - for which procedures?**
j. **In your school are the pre-clin students introduced to working on natural teeth?**
    i. **If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?**
k. **Which generation bonding agents are you using?**

Summary: All schools reported they are not teaching margin elevation in the predoctoral program. Micro-etchers are used in limited situations. Schools report using natural teeth in preclinical courses with many using a solution of formaldehyde or sterilization. The generation of bonding agents varies from each university.

UIC: No margin elevation technique. No micro-etchers. Natural teeth in dental anatomy course (identification). Now exams are digital images and no longer use real specimens. Natural teeth for sealants, PRR, and caries detection. 8th generation bonding system.

Michigan: No margin elevation. Microetchers for repairs. Natural teeth in 50/50 solution, students use gloves. 5th generation bonding agents.

Western: No margin elevation. Microetchers in lab. Natural teeth in 10% formaldehyde. 8th generation bonding agents.

WVU: No margin elevation, but sandwich techniques. No microetchers. Yes, preps on natural teeth. No amalgam and central sterilized at school. Universal, ivoclar pen (adhes pen).

IU: No margin elevation. Use microetchers for intaglio surface. Use natural teeth for examples for tooth anatomy. Cariology uses natural teeth. Bonding agents (optibond solo plus now but switching to 8th generation).

l. **What is your success rate with composite restorations at your institution?**
m. **How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?**
n. **Does your school have a separate clinical discipline managing the non-operative treatment phase?**

Summary: Many schools reported difficulty with review information to determine success rate of composite restoration at their institutions. Every school as developed a protocol to help ensure proper phasing of treatment. Many schools do not have a separate clinical discipline managing non-operative treatment phase.

UIC: Data is tough to access. Direct restoration of failures due to debonding 29%, then fractures is second. Uses a form to track failures within 2 years. Treatment plan for phase 1 to track things and require a re-evaluation. No, the clinics are comp care clinics.

Michigan: Unknown for success rate. The school will be using EPIC which will help with phasing. Yes, there is a separate clinical discipline managing the non-operative treatment phase as part of a larger course.

Western: Unknown for success rate. The patient will remain in perio until operative is started. Not a separate clinical discipline.

WVU: Success rate based on axiUm (tracked via treatment outcome review form) is 98%. For phased treatment, Phase 3 is finished then students reassess before moving onto Phase 4. Not a separate clinical discipline.

IU: Unknown for success rate. Phased treatment is managed throughout the clinics by the faculty. Integrated treatment planning form helps with the phases. Outcomes of patient care form is completed for proper phasing.

VII. Student Assessment

a. **How to address students with anxiety and overcoming failures.**

Summary: Many schools have indicated that the school's student affairs is typically involved with students with anxiety. Many schools report hiring social workers or counselors to aid students in their mental wellbeing.

UIC: Student affairs is often involved if overall anxiety is an issue. Student advocate who helps students with challenging both professionally and personally. Licensed social worker is now hired, and students are asked to meet with this person. Weekly wellness newsletters and student hotlines. Testing accommodations are available.

Michigan: Course director to discipline director. Student affairs and In-house counselor is available.

Western: Counselors to help students. Changing the grades to pass to fail from scores.

WVU: Course director to student affairs. Recognize the anxiety and how to handle things. Team leaders and advisors are assigned for mentorship.

IU: Professional transitions course. Growth mindset is taught. Student services is involved. Campus resources and wellness groups.

b. **How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?**

Summary: Many schools report that for the high stakes' examinations, teeth are marked and collected. Some projects are turn in at the end of class.

UIC: For high stake assessment, the teeth are marked with nail polish and the exam teeth are kept.

Michigan: Signatures during the class are required for the steps. Practical exam teeth are marked.

Western: Daily tracking sheets with feedback from instructors. Practical teeth are kept.

WVU: Assessments are marked with initials and nail polish. Turn in at the end of the class for some projects.

IU: Practical teeth are marked. Steps with signatures for D1 courses.

c. **How many Mock Board sessions are you performing?**
d. **Is your state/region permitting or considering the DLOSCE for licensure?**
e. **For regional licensure exams, are you opting for live or simulated examinations?**
    i. **Do you use prefabricated carious teeth for simulated exams?**

Summary: The schools reported having at least 1 Mock Board sessions for operative. Indiana is the only school permitting DLOSCE. Majority of schools reported using simulation examinations and prefabricated carious teeth.

UIC: CDCA examination is at UIC. 1 Session with Mock Boards for endo/Prosth and 1 Session for Restorative/Perio. Students do not have to pass to take the boards. Illinois requires a clinical examination and does not accept the DLOSCE. March exam in simulated only and May is mixed examination. Yes, we use prefabricated carious teeth for simulated teeth.

Michigan: For restorative mock boards, there are 2 sessions but not required. Presentation is given to help with criteria. No for DLOSCE in Michigan. Simulated exams and using Acadental.

Western: OSCE exam for the licensure exam, no tooth preparations.

WVU: CDCA and CERTA are offered. Mock boards on the weekend and is a requirement for clinic but not required to sit for the actual board examination. No to DLOSCE. Regional exam offering both live and simulated exams. Acadental and Kilgore teeth.

IU: For the Prosthodontic Section of the CDCA/ADEX, we offer 3 Mock Board sessions. Students must pass the Mock exam to sit for the Board examination. For the restorative section, we offer 2 Mock Board Sessions.

VIII. Administration

a. **How do you recruit adjunct faculty?**
b. **How do you calibrate/align faculty?**

Summary: Many schools reported recruiting adjunct faculty by hiring former student teaching assistants or retired alumni. Schools reported online sessions and in-person meetings to aid in calibration.

UIC: Student TAs often return as adjunct faculty. Also, post job openings, word of mouth, and local dental society. Preclinical calibration is performed through huddles. Clinical faculty need to complete calibration monthly live and online options. Philosophy departmental document for all new hired faculty. Faculty retreat.

Michigan: Alumni often come back to teach. Monthly in-person calibration which discusses topics from 5-7 in the evening (CE awarded) and reviewing the grading criteria. Developing on-board process for new faculty to help with aligning faculty.

Western: Dentists who are retiring often serve as adjunct faculty. Monthly calibration sessions are live and recorded for review. For preclinical courses, review the information and how to teach students.

WVU: ADEA is a good resource and state dental associations. Word of mouth and recent graduates. Regular departmental meetings. Then, scheduled calibration sessions as needed with other departments. Preclinical and clinical techniques are uniform. Adjunct faculty shadow at first. Access to lectures online for review.

IU: Student TAs often return as adjunct faculty and retired dentists. Word of mouth and state dental associations. Departmental calibrations monthly. Online calibration is required to supervise competency assessments. Shadowing first in clinics prior to supervising independently.

c. **How do you monitor and manage student learner requests for excused absences related to COVID-19?**
    i. **(e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)**
    ii. **How do you manage these missed assessments?**

Summary: Most schools are following their university guidelines. Many schools require a physician's note to be excused for assessments.

UIC: University guidelines. 10 days out is required; and need clearance to return. No penalty for missing assessments. Academic Affairs help manage the missed assessments. No remote exams now.

Michigan: University Guidelines. Letter from medical doctor if missing assessments. If approved, the assessment can be taken later.

Western: University guidelines. Letter from medical doctor if missing assessments.

WVU: Not required to report cases but follow CDC guidelines. Course directors are notified by the student and the missed assessments will be made up but may be different than original examination.

IU: Follow CDC guidelines for COVID, but do not require a doctor's note. Report to course director and OAEE that they are missing an assessment.

d. **What opportunities does your institution provide to help develop junior operative faculty?**

i. **What academic/administrative career trajectories do operative trained faculty typically pursue?**

Summary: Most schools have a mentorship program to help develop junior faculty. Faculty are encouraged to attend conferences for leadership.

UIC: Mentorship program, Faculty development fund for conference attendance

Michigan: Mentorship program. Meet monthly with Chair or Vice-chair to check in with progress and development. There are funds for faculty for conference attendance. ADEA leadership programs available.

Western: Mentoring and shadowing. No funds available. Online lectures available for new faculty to review.

WVU: Teaching scholars' program (semester long) to help with teaching techniques. Preclinical courses to help learn what is taught and to watch how to teach. ADEA leadership programs are encouraged.

IU: Peer mentoring program, ADEA membership is encouraged, Center for teaching and learning resources (Peer review, teaching techniques).

2022 National Agenda -Individual School Responses

IX. Curriculum

a. Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?
b. Are your students requesting more videos of procedures post-COVID?
    i. Do your students access YouTube and similar platforms in lieu of course content?
c. Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction?
d. How many total hours are allocated for operative dentistry instruction within the curriculum at your institution?
e. What percentage of your curriculum, if any, is devoted to amalgam instruction?

Buffalo	No Response
Case Western	No Response
Detroit Mercy	No Response
Indiana	**a.** Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? *i.* ***IU Response****: We had extensive schedule changes for 2 years for both lecture and lab. We are now back to mostly pre-pandemic scheduling and activities with masking in lab and clinical areas. Some curricular ideas that were implemented during covid have been maintained if they were found to be beneficial in learning, such as additional feedback projects.* **b.** Are your students requesting more videos of procedures post-COVID? ii. Do your students access YouTube and similar platforms in lieu of course content? *1.* ***IU Response:*** *Not to our knowledge. That said, we do occasionally refer them to videos*

	that might be helpful and available to the students that are online (i.e. Garrison videos) **c.** Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? *iii.* ***IU Response****: It is not as we didn't fully end up implementing Telehealth methods* **d.** How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? *iv.* ***IU Response****: Didactic and lab courses throughout the D1 year (M, W, F all afternoon); didactic courses on combined cariology and operative clinical applications throughout the D2 year; operative simulation review module for 1 week (M, W, F all afternoon) prior to D3 year; D3 and D4 clinical instruction and patient management* **e.** What percentage of your curriculum, if any, is devoted to amalgam instruction? *v.* ***IU Response****: D1—Preclinical course 40% amalgam instruction; D2—Didactic course 20% amalgam; D3 and D4 students are placing mostly resins (approximately 10% amalgams). Additionally, D4 students are required to take an operative simulation competency (MOD amalgam)*
Michigan	**a.** Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? Yes Didactic courses kept hybrid Simlab – back to normal as before the pandemic Clinic – Kept the night clinic once a week that started to be offered during the pandemic. We are using all cubicles available without spacing as we used to do during COVID. **b.** Are your students requesting more videos of procedures post-COVID? They are requesting more demos (videos or live) vi. Do your students access YouTube and similar platforms in lieu of course content? Yes

	c. Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? No How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? - **d.** D517 D519A D519B D520A D520B D620 D653 Those 7 courses listed add up 15.5 credit hours and are the core of Operative. We are not including Cariology (2 extra courses), clinical foundations 2 (indirect restorations taught by restorative and Prosthodontics together) and digital dentistry (1 separate course – Digital is also taught in clinical foundations 2). For D1 and D2s: Pre-clinical sessions 3 hours 2x week Average 2 hours didactic week (clinical foundations 1 and 2) + 3 hours sessions 2x week of cariology for D1s and 3hs session of Digital dentistry 1x week for D3. For D3s and D4s: Clinics (comprehensive care – not only operative). D3s have 4 appt/week and D4s have 5appts/week. D3s and D4 have the option of adding 2 extra appts, one for emergency and one called 24hs that can be used if the clinic has a chair available): Clinic sessions: 3 hs session in the morning 4hs session in the afternoon 2.5 session in the evening once a week **e.** What percentage of your curriculum, if any, is devoted to amalgam instruction? Around 10% (of the Restorative curriculum)

Midwestern-Illinois	No Response
Ohio State	No Response
Pittsburg	No Response
University of Illinois-Chicago	a. Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? Yes, most didactic sessions were recorded and are available online to review. Many courses are offered as hybrid. Clinic schedules are staggered to avoid patient's accumulation in waiting areas. b. Are your students requesting more videos of procedures post-COVID? Yes, they like the convenience and flexibility of recorded videos and demos. i. Do your students access YouTube and similar platforms in lieu of course content? Yes. c. Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? Not really, there is more asynchronous learning, allowing time for the students to do other activities in the college. d. How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? Approx. 1.5 hour of didactic and 3 hours of lab per week; Total: 60 hours didactic and 130 hours of lab. e. What percentage of your curriculum, if any, is devoted to amalgam instruction? The first 5 weeks of the operative curriculum are devoted to principles of cavity design, amalgam preparations and restorations. We have 2 performance exams related to amalgam in the D1 year 1st semester. (Class I and Class II prep and restoration).
West Virginia	**a.** Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? Many meetings stayed in zoom format. Some instructors wanted zoom format. University pushed for in-person experience, so most changes returned to pe-COVID formats. Most lectures are recorded and are posted in the online course content- which was in place pre-COVID but utilized more now per student desire. Clinic has returned to normal operations.

	b. Are your students requesting more videos of procedures post-COVID? No, they do request more demos. It would be nice to have more videos. Sturdevant videos are available for amalgam- because it's their first OP class- they prefer small group demos (able to do- an advantage of a small school) More videos are available for composite and fixed than Operative. vii. Do your students access YouTube and similar platforms in lieu of course content? They access some youtube videos as additional resources, but are not assigned to them. **c.** Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? Some curriculum changes have been made implementing technology/ digital dentistry- but if any effect is more time vs less. We have telehealth implemented but it has not affected our time for instruction. **d.** How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? D1-4 cred hrs 4 hrs twice a week =128 hrs (amalgam), D2- 8 cred hrs (once a week)/ 128 hrs (composite and indirect), D3-4 cred hrs (once a week)/ 64 hrs (advanced restorations) **e.** What percentage of your curriculum, if any, is devoted to amalgam instruction? 4 credit hrs (128 actual hours) out of 192 total credit hours--- or 2% There are 6 competency assessments (Cl I prep, Cl V pep, Cl II prep, Cl II rest, Class II prep- MOD and indirect/ #13, and Complex /cusp replacement restoration- option for pin or amalgapin) In clinic they have a complex restoration assessment- where part of competency is judgement on best material—composite or amalgam.
Western-Ontario	**a.** Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped? Most of the changes that happened due to COVID-19 were maintained, such as: - The 1st and 2nd year students were divided into two groups in the simulation clinic. It resulted in more space for the students and more efficient supervision. It also facilitated the calibration by reducing the number of instructors, who are teaching in both groups. It also helped as to manage given

	our current shortage of faculty/instructors, plus the size of Sim Clinic will not accommodate the larger 2nd year class. - The Sim. Clinic session was extended to 5 hours to provide sessions of 2 hours and 15 minutes to each group. Some sessions are also combined into 5 hr sessions for a single group where we felt that this would be beneficial. - The online asynchronous lectures became part of the curriculum as we noticed that the students were coming better prepared to the Sim. Clinic. A 30-minute review was incorporated to the new curriculum with time to answer questions. The time used for lectures was allocated for the practice time. A longer in-person Q & A/Review session was also introduced to help reinforce/review concepts & answer additional questions. **b.** Are your students requesting more videos of procedures post-COVID? viii. Do your students access YouTube and similar platforms in lieu of course content? We have always provided demonstrative videos to students, and they really appreciate them. They keep asking for more videos even before Covid-19. We agree that it is a very helpful tool to enhance students' understanding through visualization. Videos have a place, but do not tend to promote/result in deep understanding of concepts; videos are made by faculty for internal use and do not utilize YouTube or similar. **c.** Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? NA. **d.** How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? The first-year Operative: 43h lectures and 76.5h lab The second-year Operative: 32h lectures and 90h lab **e.** What percentage of your curriculum, if any, is devoted to amalgam instruction? In the pre-clinical setting, the hours dedicated to resin composite have increased over the last several years. The amalgam teaching percentage is now around 45%.

X. Materials and Techniques

a. Zirconia restorations (preparation guidelines, preclinical and clinical use)
b. Do you teach bulk fill technique?
    i. If so, what products do you use?
c. Do you teach the Bioclear method?
    i. If yes, is it part of the curriculum or main track operative?
d. Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus.
e. How do you teach post and core?
    i. Human teeth or simulated, (i.e. Accidental or Frasaco)?
f. Are you doing more traditional impressions than scans?
g. Are you clinically scanning and milling on the same day?
    i. Do you have a dedicated faculty/digital technician?
h. Do you teach margin elevation?
    i. If so, What material do you use?
i. In your school are micro-etchers introduced?
    i. If Yes - for which procedures?
j. In your school are the pre-clin students introduced to working on natural teeth?
    i. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?
k. Which generation bonding agents are you using?
l. What is your success rate with composite restorations at your institution?
m. How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity?
n. Does your school have a separate clinical discipline managing the non-operative treatment phase?

Buffalo	No Response
Case Western	No Response
Detroit Mercy	No Response
Indiana	**a.** Zirconia restorations (preparation guidelines, preclinical and clinical use) i. ***IU Response:*** *At IU, we are teaching students to use the monolithic zirconia restorations. The preparation guidelines are similar to the full gold crown preparation criteria. Currently, we do not have any preclinical projects for zirconia but are planning to incorporate a project next academic year. The clinical use of zirconia is limited to the single unit posterior*

	full coverage restorations and properly treatment planned FPDs. **b.** Do you teach bulk fill technique? ii. If so, what products do you use? 1. ***IU Response**: Bulk Fill is not taught in pre-clinical labs for DDS students, however the technique is presented in D3 didactic Operative courses. In the clinics-we will be introducing GC's everX reinforced flowable composite for bulk-fillings and core-build-ups.* **c.** Do you teach the Bioclear method? iii. If yes, is it part of the curriculum or main track operative? 1. ***IU Response**: No* ***d.*** Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. *iv.* ***IU Response:** Not sure, used to in D3 year in Dental Materials course* **e.** How do you teach post and core? v. Human teeth or simulated, (i.e. Accidental or Frasaco)? 1. ***IU Response:** We teach post and cores using simulated teeth - #8 Acadental. The students are taught how to prepare a post space for a cast post and core. Also, the students place a parapost using resin cement and a resin core.* **f.** Are you doing more traditional impressions than scans? *vi.* ***IU Response:** Yes, currently we are using only traditions impressions. However, we have purchased 25 3Shape Trios scanners and plan to implement scanning into the clinical curriculum by Summer 2023.* **g.** Are you clinically scanning and milling on the same day? vii. Do you have a dedicated faculty/digital technician? 1. ***IU Response:** We have purchased 25 3Shape Trios scanners and plan to implement scanning into the clinical curriculum by Summer 2023. We plan to expand our in-house fabrication as part of a phased approach of our digital plan. We hope to hire a dedicated digital technician.* **h.** Do you teach margin elevation? viii. If so, What material do you use?

	1. ***IU Response:*** *No, we do not teach elevated margins in the DDS Program. However, we are teaching margin elevation in the Graduate Operative Program. This is performed under both direct and indirect restorations where the proximal gingival margin is deep. We are using Glass ionomer restorative cements to accomplish this. Either Resin-modified glass ionomer (RMGI) or conventional setting GI's are indicated. Since margin elevation is used on deep gingival margins, getting light to the area can be a challenge, so a conventional setting GI is used most often. We have been using Fuji IX GP Extra for this, but are transitioning to Equia Forte HT Fil. We also have Garrison matrix bands designed for margin elevation. The band height is short and the band has more flare to be able to achieve better emergence profile.* **i.** In your school are micro-etchers introduced? ix. If Yes - for which procedures? 1. ***IU Response****- yes, available in the graduate clinics to clean/roughen ceramics, metal, and resin composite repairs.* **j.** In your school are the pre-clin students introduced to working on natural teeth? x. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? 1. ***IU Response****-not since Covid for Operative courses, prior to Covid-did use natural teeth and had them autoclaved at the school* **k.** Which generation bonding agents are you using? *xi.* ***IU Response****: Optibond Solo Plus (5th generation), but changing to GC's G-Premio which is an 8th generation. IUSD is switching to all GC products for resin composites and GIs.* **l.** What is your success rate with composite restorations at your institution? *xii.* ***IU Response****: It varies based on patients compliance, risk assessment, difficulty of prep/restoration, and isolation conditions.*

	m. How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? *Phased treatment is managed throughout the clinics by the faculty. Integrated treatment planning form helps with the phases. Outcomes of patient care form is completed for proper phasing.* *xiii.* ***IU Response****:* **n.** Does your school have a separate clinical discipline managing the non-operative treatment phase? *xiv.* ***IU Response****: No*
Michigan	**a.** Zirconia restorations (preparation guidelines, preclinical and clinical use) – yes. Only 30% of our clinic crowns are PFMs to math if pt has already another PFM. Most of our cases are zirconia (specially posteriors) or emax (anteriors). **b.** Do you teach bulk fill technique? – yes but only didactic xv. If so, what products do you use? **c.** Do you teach the Bioclear method? No xvi. If yes, is it part of the curriculum or main track operative? **d.** Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. No **e.** How do you teach post and core? Yes (didactic + simlab+ clinic) xvii. Human teeth or simulated, (i.e. Accidental or Frasaco)? We use both human teeth and the Accadental pre-prepped teeth. **f.** Are you doing more traditional impressions than scans? both **g.** Are you clinically scanning and milling on the same day? yes xviii. Do you have a dedicated faculty/digital technician? Yes for both **h.** Do you teach margin elevation? Not in the undergrad clinic (only grad). We refer the patient to one of our grad clinics if this is necessary. xix. If so, what material do you use? **i.** In your school are micro-etchers introduced? yes xx. If Yes - for which procedures? Repairs and indirect procedures **j.** In your school are the pre-clin students introduced to working on natural teeth? yes

	xxi. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? Simlab – We keep teeth in Fisher scientific 50/50% glycerin/ethanol. Our teeth come from Oral Surgery already in this solution. It is not clear how they are disinfected. Students handle them with full PPE. No natural teeth in dental anatomy anymore. We have a dental anatomy platform and 3D tooth bank. **k.** Which generation bonding agents are you using? 5TH generation – optibond solo plus **l.** What is your success rate with composite restorations at your institution? NA **m.** How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? Varies from faculty to faculty **n.** Does your school have a separate clinical discipline managing the non-operative treatment phase? Yes, Margherita Fontana /Carlos Gonzales have Cariology courses in the DDS curriculum where they teach non-operative caries management. We also have a discipline where students practice on each other.
Midwestern-Illinois	No Response
Ohio State	No Response
Pittsburg	No Response
University of Illinois-Chicago	**a.** Zirconia restorations (preparation guidelines, preclinical and clinical use) For clinic, we have separate guidelines for monolithic zirconia and porcelain layered zirconia (PFZ). For monolithic: - Total axial convergence 4-10°/ wall - Axial reduction 1.25-1.5 mm - Occlusal/ Incisal reduction 1.0-1.5 mm - Finish line width and margin design: Deep chamfer, round shoulder, round internal line angles with a margin width of at least 1mm - Its use should be limited to posterior restorations For porcelain layered zirconia (PFZ) - Total axial convergence 4-10°/ wall - Axial reduction 1.25-1.5 mm

	- Occlusal/ Incisal reduction 2.0 mm - Finish line width and margin design: Deep chamfer, round shoulder, round internal line angles with a margin width of at least 1mm - Its use should be limited to anterior restorations. In preclinic, students practice and challenge during their performance exam, an all-ceramic crown preparation of #8. For this, the guidelines are the same as the above but incisal reduction 1.5-2mm. Michigan: Ontario: Lots of Zirconia. WV: PFZs bridges are OK IU: more conservative preps, almost like gold. No preclinical exercise on Zirconia. Lots more Zirconia getting done in clinics. 50% PFM 50% ceramics. Do you teach bulk fill technique? Bulk fill composites are mentioned during the dental composite lecture when explaining advances in materials compositions to overcome issues related to polymerization shrinkage; however, we still don't use them clinically routinely at the predoctoral level, since the literature is still inconsistent regarding their clinical performance. i. If so, what products do you use? Renamel nanohybrid and microfill from Cosmodent (local company) **b.** Do you teach the Bioclear method? No. ii. If yes, is it part of the curriculum or main track operative? **c.** Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. No, predoctoral students don't get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. **d.** How do you teach post and core? We used customized teeth from Frasaco. For cast post and core, we use tooth #8 (custom made with a pre prepped canal) and for prefabricated post we used tooth #29 custom made tooth.

	Human teeth or simulated, (i.e. Accidental or Frasaco)? Frasaco a. Are you doing more traditional impressions than scans? We do more traditional impressions than scans. Students do at least 4 tooth supported indirect restorations using CAD/CAM and some implant supported impressions as well, yet most cases are done the traditional way. a. Are you clinically scanning and milling on the same day?. Very few cases are done same day, and if they are, they usually take 2 sessions (morning and afternoon). We are working on having more equipment and more training for students and faculty to be able to do more same day cases. Do you have a dedicated faculty/digital technician? We have a specific clinic for CAD/CAM cases with trained faculty and a digital technician. Michigan: 12 scanners and 4 scanners. 12 faculty no lab technician. One on one. Integrated in their clinics. 2 cases in D3s and 2 in D4s year. Cerec system. Empress Cad, Zirconia. Esthetic Zone E max. **e.** Do you teach margin elevation? No iii. If so, What material do you use? **f.** In your school are micro-etchers introduced? No. iv. If Yes - for which procedures? **g.** In your school are the pre-clin students introduced to working on natural teeth? Yes, during the dental anatomy course in the D1 fall semester and in one operative session that focuses on a caries excavation exercise, pit and fissure sealants and PRRs. Also, the endodontic course uses extracted teeth. v. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? Students request 10% formalin from the dispensary window and store the teeth in formalin solution. **h.** Which generation bonding agents are you using? We are currently using the 8th generation of adhesive/bonding systems (or "universal" system)

following the "total-etching technique". We use Scotchbond universal from 3M.

What is your success rate with composite restorations at your institution? Semprum. Unfortunately, we do not have this data easily accessible at this time. But based on our adverse outcomes report, we are able to identify what are the most common adverse outcomes with direct restorations.

The data below is from June 2021 to June 2022.

Direct Restorations (D2100s, D2300s)	
Debonding	29.21%
Fractured Restoration	26.97%
Marginal Adaptation	15.73%
Interproximal Contact	11.24%
Occlusal Contact	1.12%
Shade	0 %
Pulpal Pathosis	0 %
Periodontal Pathosis	0 %
Periodontal Pathosis	0 %
Undiagnosed Caries	4.49%
Patient Satisfaction	1.12%
Other	10.11%

i.

How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? All treatment plans include a Phase I, Phase II, and Phase III Re-evaluation code. Following the completion of Phase I care, students must complete a Phase I Re-eval procedure with the faculty and complete this no-charge code for their patients. An automatic stop in Axium prevents students from completing future non-Phase I therapy on the patient until this code is completed or deleted by the faculty/Managing Partner. Once all phases of care are completed, the student must complete a Phase III re-evaluation with a restorative faculty that has an associated axium form. Quality Assurance metrics are gathered and reviewed regularly from this Phase III form by the Office of Clinical Affairs.

Does your school have a separate clinical discipline managing the non-operative treatment phase? No, our predoctoral clinics are comprehensive care clinics. We do not have a "discipline-based" clinical curriculum. However, we do have specialized clinics for Implant Therapy, Digital Dentistry, Oral Surgery, Pediatrics, and Oral Surgery with specialty-trained faculty to oversee the care. SDF applications are done in the digital clinic.

West Virginia	**a.** Zirconia restorations (preparation guidelines, preclinical and clinical use) Using monolithic, zirconia and PFZ in clinic- and taught in preclinic.

	For full-contour zirconia - Total axial convergence 4-10°/ wall - Axial reduction: minimum of 1.0mm (ideal); up to 1.5 acceptable - Occlusal/ Incisal reduction 1.0-1.5mm - Finish line width and margin design: Deep chamfer or shoulder preferred; feather-edge acceptable but not ideal; round internal line angles **b.** Do you teach bulk fill technique? Yes, but this is not our primary restorative technique. xxii. If so, what products do you use? We use Tetric Evoceram Bulk Fill and Kerr's SonicFill. **c.** Do you teach the Bioclear method? Yes. xxiii. If yes, is it part of the curriculum or main track operative? This technique is taught in our Advanced Restorations course and utilized in the SIMLab on typodonts. Students are able to use this technique/these materials in the clinic if supervised by someone trained in the technique. **d.** Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. We do not have the Ultradent Shear Bond testing apparatus. We do have a larger apparatus for testing, but it is infrequently utilized and not part of their curriculum. They are exposed to the theory, how it is done, and what the results mean, however. **e.** How do you teach post and core? xxiv. Human teeth or simulated, (i.e. Acadental or Frasaco)? Natural teeth- extracted tooth either mounted in stone or mounted in a dentoform with impression material. Only prefab posts- not cast post and cores. **f.** Are you doing more traditional impressions than scans? xxv. Currently we are still taking traditional impressions more than digital scans but within our CRET Dental Innovation Center, roughly 40% of the crowns in this particular clinic are scanned and milled. The system we have is CEREC. **g.** Are you clinically scanning and milling on the same day? xxvi. Currently we are milling in our CRET Innovation Center but we are soon expanding to our man clinic. xxvii. Do you have a dedicated faculty/digital technician?

	1. No but we have several faculty that aid in the preclinic and clinical instruction of milling, staining, and glazing and teach the technique to the students in different areas of the preclinical and clinical curriculum. **h.** Do you teach margin elevation? No, we teach sandwich techniques, but not for margin elevation. xxviii. If so, What material do you use? No, they are discussed in a course so the students are aware but this technique is not advocated within our preclinical or clinical curriculum. **i.** In your school are micro-etchers introduced? xxix. If Yes - for which procedures? No **j.** In your school are the pre-clin students introduced to working on natural teeth? Yes- they do preps on mounted natural teeth xxx. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? Turned in to central processing and autoclaved **k.** Which generation bonding agents are you using? Universal, and predominately with a SEP technique with a selective etch of the enamel **l.** What is your success rate with composite restorations at your institution? 98.68%- this is student clinic. Higher in other clinics. **m.** How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? Out treatment planning Phase III is disease control (phase.) Students must complete a post treatment assessment exam (QA) to be able to move on to phase IV (definitive) treatment- fixed/removable/ortho, etc. **n.** Does your school have a separate clinical discipline managing the non-operative treatment phase? Restorative Dentistry encompasses operative and prosthodontics. Fixed and Removable disciplines are separate from operative.
Western-Ontario	**a.** Zirconia restorations (preparation guidelines, preclinical and clinical use) Monolithic: Occlusal/ Incisal reduction 1.25-1.5 mm; axial reduction 1.0-1.25 mm; modified shoulder.

	b. Do you teach bulk fill technique? No xxxi. If so, what products do you use? No **c.** Do you teach the Bioclear method? No xxxii. If yes, is it part of the curriculum or main track operative? No **d.** Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. No. **e.** How do you teach post and core? Yes i. Human teeth or simulated, (i.e. Accidental or Frasaco)? Simulated, using Kilgore root canal filled teeth **f.** Are you doing more traditional impressions than scans? Traditional impressions are mostly done in our school. **g.** Are you clinically scanning and milling on the same day? No. xxxiii. Do you have a dedicated faculty/digital technician? Not a dedicated faculty, but our technician is excellent in digital dentistry. **h.** Do you teach margin elevation? No. xxxiv. If so, What material do you use? **i.** In your school are micro-etchers introduced? Not in the clinic, just in the lab to sandblast the interna surfaces of zirconia and metal onlays and crowns before cementation. xxxv. If Yes - for which procedures? Lab/before cementation. **j.** In your school are the pre-clin students introduced to working on natural teeth? Yes. xxxvi. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage?

	For cariology and endodontic procedures. They are stored in 10% formaldehyde or in another disinfecting material. **k.** Which generation bonding agents are you using? The Universal Scotchbond adhesive (total and selective etch technique) + Ultradent Peak Universal (total etch technique). **l.** What is your success rate with composite restorations at your institution? We do not have a system in place to track it **m.** How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? Patients go first to Periodontics and then to the restorative disciplines. **n.** Does your school have a separate clinical discipline managing the non-operative treatment phase? No, but the patients go first to Periodontics clinical course.

XI. Student Assessment

a. How to address students with anxiety and overcoming failures
b. How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?
c. How many Mock Board sessions are you performing?
d. Is your state/region permitting or considering the DLOSCE for licensure?
e. For regional licensure exams, are you opting for live or simulated examinations?
    i. Do you use prefabricated carious teeth for simulated exams?

Buffalo	No Response
Case Western	No Response
Detroit Mercy	No Response
Indiana	**a.** How to address students with anxiety and overcoming failures *ii.* ***IU Response****: We teach a professional transitions course to new D1 students during the summer before the fall semester begins. We cover topics such as*

	study skills/time management, Mindset, and Motor Skill Transitions in this course. In our D1 preclinical lab courses, we regularly reinforce these concepts. We are also readily for student meetings and support for students throughout the DDS program. **b.** How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? *iii.* ***IU Response****: All competencies, practicals, and assessments are given new specific test teeth with an identifier and proctored throughout the exam. We do not release these items back to students. Projects have always been a concern, however, keeping strict practical and competency guidelines ensures that students meet performance metrics. We do try address these ethical issues in our pre-clinical syllabi and we meet with other pre-clinical lab faculty to discuss any issues as they arise.* **c.** How many Mock Board sessions are you performing? *iv.* ***IU Response:*** *For the Prosthodontic Section of the CDCA/ADEX, we offer 3 Mock Board sessions. Students must pass the Mock exam to sit for the Board examination. For the restorative section, we offer 2 Mock Board Sessions.* **d.** Is your state/region permitting or considering the DLOSCE for licensure? *v.* ***IU Response****-yes, Indiana is one of 6 states that accepts it. Others are Washington, Oregon, Arkansas, Iowa, Colorado* **e.** For regional licensure exams, are you opting for live or simulated examinations? vi. Do you use prefabricated carious teeth for simulated exams? *1.* ***IU Response****-simulated exams with prefabricated carious teeth*
Michigan	**a.** How to address students with anxiety and overcoming failures – Through the course director, discipline coordinator and dean of student affair affairs and there is a trained psychologist available in the school. **b.** How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? We only sign during classes when students are working

	c. How many Mock Board sessions are you performing? Two **d.** Is your state/region permitting or considering the DLOSCE for licensure? No **e.** For regional licensure exams, are you opting for live or simulated examinations? Simulated vii. Do you use prefabricated carious teeth for simulated exams? yes
Midwestern-Illinois	No Response
Ohio State	No Response
Pittsburg	No Response
University of Illinois-Chicago	How to address students with anxiety and overcoming failures We ask all students to follow up with the Course Director. If the student shares their challenge is related to anxiety, we refer the student to the office of Student Affairs. There are a variety resources available to help the student- Student Advocate position, Resilience Center, licensed Social Worker (each incoming student meets with her unless they opt out, Disability Resource Center, etc). If students have a documented disability, we make course accommodations. **a.** How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? We keep their exam teeth. All preparations and restorations are done during the session including self-assessments and faculty feedback. They have wax up projects to complete and present for feedback. Hopefully students present their own in preparation for a wax-up performance exam. How many Mock Board sessions are you performing?. Our students challenge CDCA examination at UIC. Therefore, we perform two mock board sessions for the students prior to their exam. One of the sessions happens in the fall, during their third year, to prepare them for the Endodontics and Prosthodontics portion. The second session happens in the spring semester, during their fourth year, to prepare them for the Restorative and Periodontal Scaling portion. Is your state/region permitting or considering the DLOSCE for licensure? No –DLOSCE is not accepted for licensure in Illinois. The test requirements for licensure in Illinois are listed in both the Dental Practice Act and the Rules. The

	Dental Practice Act lists the specific testing agencies whose tests are accepted (CDCA, CITA, CRDTS, SRTA, WREB). Any other test would probably have to go to the legislature to have the Dental Practice Act amended. At this time the DLOSCE is not being considered by the Illinois Board of Dentistry (verified with board member). They are still requiring all procedures to be completed on manikin and/or patient. For regional licensure exams, are you opting for live or simulated examinations?. Both are offered. The earlier exam (March) is simulated only. The traditional format exam offered later (May) has the option of simulated or live patient. We encourage our students to refer to each state board in where they would like to practice, and choose the appropriate exam type. We have been offering simulated and live patient examinations, but majority of the students have chosen to take simulated exam. Our mock board exam for the Restorative/ Periodontal portion, is done on a manikin. **b.** .Do you use prefabricated carious teeth for simulated exams? Yes. The carious Acadental teeth are used for mock board and remediation for failed mock board procedures. In addition, students are given 4 simulated carious teeth for practice (2 anterior and 2 posterior teeth). Students wanting to practice additionally must buy their own teeth. We use the Acadental DTX carious teeth to challenge the exam for their restorative class III and class II.
West Virginia	**a.** How to address students with anxiety and overcoming failures Each student is assigned either a team leader (D3 and D4) or advisor (D1 and D2) in addition to a "big" (an upperclassman) and a mentor (outside of the SOD) to help work through the ebbs and flows of dental school. Our wellness committee sponsors activities/events/encouragement during challenging times throughout the curriculum (midterms and finals, boards). We have mindfulness training aimed at breathwork and putting things into perspective. We also have behavioral health clinicians onsite at the HSC. **b.** How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?

	Students are permitted to work on sim lab projects only during the course lab when instructors are present. They do not have access to graded projects after hours. There are daily evaluation sheets for daily projects, and performance assessment teeth are marked with initials or nail polish. Waxups are kept by the instructor between classes- the only exception may be setting teeth- they are permitted to work on those after hours. Course syllabi contain a statement regarding this as well. **c.** How many Mock Board sessions are you performing? We have one start to finish Mock Board exam, and many practice mock board sessions, including mock board sessions in pre-clinical courses **d.** Is your state/region permitting or considering the DLOSCE for licensure? No **e.** For regional licensure exams, are you opting for live or simulated examinations? Hybrid- Since WV is accepting simulated examinations, that has been our primary exam; however, we do have students going to states that require live examinations, and those students are permitted to have patients viii. Do you use prefabricated carious teeth for simulated exams? Yes, both Acadental and Kilgore
Western-Ontario	**a.** How to address students with anxiety and overcoming failures We try to help students focus on learning rather than grades, and we have the support of the Learner Experience office, which has a representative in Dentistry. They provide counsellors to help our students. Positive reinforcement, & trying to promote the ideas of personal growth, resiliency, and maintaining perspective. **b.** How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes? For practical exams, the Exam Dentoforms are collected at a prior session, checked over/examined, and then returned only immediately prior to the beginning of the exam. Each exam dentoform is then checked again upon insertion into the mannequin, and must be signed off by an instructor on the student's exam paper before they can begin the exam/for the exam to be valid. Students also work with

	rubber dam in place, which further deters the opportunity to switch teeth. **c.** How many Mock Board sessions are you performing? None, since the process is different in Canada. The students do not perform a pre-clinical test in mannequins for the OSCE exam. **d.** Is your state/region permitting or considering the DLOSCE for licensure? In order to get the license, the student need to pass in the written NDEB exam and OSCE exam. **e.** For regional licensure exams, are you opting for live or simulated examinations? None. ix. Do you use prefabricated carious teeth for simulated exams?

XII. Administration

a. How do you recruit adjunct faculty?
b. How do you calibrate/align faculty?
c. How do you monitor and manage student learner requests for excused absences related to COVID-19?
    i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time)
    ii. How do you manage these missed assessments?
d. What opportunities does your institution provide to help develop junior operative faculty?
    i. What academic/administrative career trajectories do operative trained faculty typically pursue?

Buffalo	No Response
Case Western	No Response
Detroit Mercy	No Response
Indiana	**a.** How do you recruit adjunct faculty? *ii.* ***IU Response****: We often obtain new adjunct faculty through collegial collaboration and word of mouth, and former students (many served as TA's). We also utilize retired dentists in the community. It is possible to also communicate needs through alumni communications.*

	b. How do you calibrate/align faculty? *iii.* ***IU Response****: We use canvas courses to calibrate faculty and require modules/exercises to be completed. In addition, we have at least 2 calibration meetings a year across all faculty. We further have daily calibration check in meetings for our pre-clinical lab adjunct faculty.* **c.** How do you monitor and manage student learner requests for excused absences related to COVID-19? iv. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) v. How do you manage these missed assessments? *1.* ***IU Response****: The students are required to submit official absence notices for missed assessments. We have to work with various administrative offices and administrative assistants to provide make up exams. Finding an appropriate and a proctor is particularly problematic for these missed (related to Covid or otherwise).* **d.** What opportunities does your institution provide to help develop junior operative faculty? vi. What academic/administrative career trajectories do operative trained faculty typically pursue? *1.* ***IU Response****: IUSD coordinates new faculty programs for the faculty within the school and campus. Additionally, senior faculty mentor and embrace new faculty, providing leadership. We have adopted a model where we have co-courses for most of operative courses to assist with mentorship.* *a. The career trajectory depends on the faculty choice (tenure vs promotion). Most clinical faculty will choose a promotion route, especially if they are interested in future in administration. Others may choose research (clinical or educational).*

Michigan	**a.** How do you recruit adjunct faculty? Through school's website existing faculty recommendation and Associate Chair network (personal communication) **b.** How do you calibrate/align faculty? Calibration session are offered bimonthly (will become monthly starting in September 2022) **c.** How do you monitor and manage student learner requests for excused absences related to COVID-19? vii. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) – Students have to present a doctor's note to be able to have an exam rescheduled. We also have a university screen system that tested students once a week during COVID. viii. How do you manage these missed assessments? Students are offered an extension of the deadline at the course director's discretion. **d.** What opportunities does your institution provide to help develop junior operative faculty? ix. What academic/administrative career trajectories do operative trained faculty typically pursue? Each faculty in the department receives $2,000 dollars per year in discretionary funds to support participation in conferences, seminars, payment of memberships, journals subscriptions. Junior faculty (or more senior faculty recently recruited to the school) meet monthly with the department chair to receive individual guidance and mentorship regarding career progress as well as to discuss strategies to overcome challenges/concerns. And finally, our faculty is encouraged to participate in leadership training. For example, two of our restorative faculty participated in the ADEA Leadership Institute (1 year program) in the last 5 years.
Midwestern-Illinois	No Response
Ohio State	No Response
Pittsburg	No Response
University of Illinois-Chicago	**a.** How do you recruit adjunct faculty? We post job openings for part time faculty on the UIC Job Board, encourage recent graduates to consider teaching, and use word of mouth via

	existing faculty and our local dental societies. We have a robust TA system that have yielded a strong group of faculty, particular operative. **j.** How do you calibrate/align faculty? Calibration happens in many ways: 1.Preclinical calibration: The preclinical faculty calibration is course based. Every week the course director sends an email of the expectations of the session. We do morning faculty huddles to calibrate on the exercise of the day. 2. Clinical faculty is required to complete a monthly live calibration session followed by a Qualtrics quiz. If the faculty is not available, they have access to the recorded session on a repository of lectures via Blackboard followed by a quiz. Faculty have access to this repository all year around. 3. Departmental philosophies are available via Blackboard. All new faculty onboarded with the director of assessments who reviews the repository and ensures the departmental philosophies have been reviewed. 4. One faculty retreat was dedicated to faculty calibration and training on providing feedback. 5. We have a Director of Calibration and assessment that assist us on staying up-to -date. How do you monitor and manage student learner requests for excused absences related to COVID-19? Absences related to COVID must follow University guidelines. Every student must report these absences to the UHC. Students must be cleared to return by the UHC. As our curriculum is competency based and not requirement based, the course director / managing partner works with the student to make up any missed sessions or provide opportunities for patient care. vi. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) vii. How do you manage these missed assessments? All students have the opportunity to make up the missed exam. The Office of Academic Affairs assist with proctoring these missed exams. In some instances student challenge the exam using AI proctoring abilities via Examsoft.

	b. What opportunities does your institution provide to help develop junior operative faculty? There are several programs to help develop all Junior faculty in our college: Junior faculty mentorship program, STEFF program. P and T mentoring program. There will be an added college wide faculty development fund to encourage attending conference for faculty development. We also encourage them to participate in our courses by lecturing in their area of expertise or leading any of the sessions. We have a robust TA system that have yielded a strong group of faculty, particular operative. viii. What academic/administrative career trajectories do operative trained faculty typically pursue? The operative trained faculty can go in many different directions. Our department provides opportunities in many different areas based on the faculty interest. We have faculty that is mainly dedicated to a clinical track such as digital dentistry, cariology, dental materials, operative technique. We have one operative trained faculty in a research track that also teaches in clinic.
West Virginia	**a.** How do you recruit adjunct faculty? ADEA, State Dental Associations, online posting within School of Dentistry website, word of mouth, recent graduates **b.** How do you calibrate/align faculty? Departmental meetings and scheduled calibration sessions as needed., "lunch and learns" among depts. New faculty shadow first. **c.** How do you monitor and manage student learner requests for excused absences related to COVID-19? Students are required to notify course directors when required to be out with COVID, and arrange make- up of work. x. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) Have not had this occur yet. Students are usually advised if they miss an exam they will be given a different and often more difficult exam which likely deters this xi. How do you manage these missed assessments? It is at the discretion of the course director for each course

	d. What opportunities does your institution provide to help develop junior operative faculty? Teaching scholars program, shadowing, involved in pre-clinical courses, mentoring. ADEA Leadership Institute program. xii. What academic/administrative career trajectories do operative trained faculty typically pursue? Become course directors, often aspire to administrative roles as they become available
Western-Ontario	**a.** How do you recruit adjunct faculty? Usually, we ask adjuncts and other faculty to spread the word, and we contact people during dental meetings and other events. **b.** How do you calibrate/align faculty? Calibration sessions are provided to pre-clinical and clinical faculty in a regular basis. **c.** How do you monitor and manage student learner requests for excused absences related to COVID-19? This has been a problem, as during the worst of COVID documentation for student absences was not required, but this is in the process of/is being addressed now. All requests for accommodation/excused absences go through the Academics area/Education following the University guidelines. Manager and/or Learner Experience Office for standardization; Course Directors are not allowed to decide this on their own. xiii. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) See above xiv. How do you manage these missed assessments? Didactic Exams- a new/make up exam is given at another time Practical Exam- student performs this at a future/the next session; having 2 student cohorts has helped to facilitate this. **d.** What opportunities does your institution provide to help develop junior operative faculty?

	Calibration sessions, workshop during calibration sessions, CE courses xv. What academic/administrative career trajectories do operative trained faculty typically pursue? Some get involved in administrative areas and mentoring of students. Few other pursue an academic position.

Region V

2022 National Agenda

XIII. Curriculum

a. Were curriculum or schedule changes adopted due to COVID-19 maintained after pandemic related hospitalizations dropped?
    i. Some schools have kept a 50% class size to help with staffing. Others have returned fully to 100%
b. Are your students requesting more videos of procedures post-COVID? Yes, but not related to COVID.
    i. Do your students access YouTube and similar platforms in lieu of course content? Not in lieu of, but in addition to.
c. Has the introduction of new content (e.g. Telehealth, etc…) affected the amount of time devoted to operative dentistry instruction? Yes to a certain extent. Meaning integrating scanning and new materials take away from the original curriculum, but this is the new curriculum and items need to be incorporated as well.
d. How many total hours are allocated for operative dentistry instruction within the curriculum at your institution? 120-140
e. What percentage of your curriculum, if any, is devoted to amalgam instruction? On average 10-15% with Rutgers at 5% and Temple and Stonybrook at 20%

XIV. Materials and Techniques

a. Zirconia restorations (preparation guidelines, preclinical and clinical use) The Operative faculty did not feel they could answer this question since it was related to Fixed Prosthodontics.
b. Do you teach bulk fill technique? No
    i. If so, what products do you use?
c. Do you teach the Bioclear method? No, TCDM speaks about it, but it is not used. Class II Composite is almost exclusively taught among the schools with a sectional matrix. Class II Amalgam is taught with tofflemire.
    i. If yes, is it part of the curriculum or main track operative?

d. Do students get exposed to shear bond testing utilizing the Ultradent Shear Bond testing apparatus. Only at Tufts and Stonybrook and only in a research setting.
e. How do you teach post and core?
    i. Human teeth or simulated, (i.e. Accidental or Frasaco)? Only Simulated, NYS no longer allows human teeth.
f. Are you doing more traditional impressions than scans? Temple and Rutgers is doing more scans. Everyone else is more traditional than scans.
g. Are you clinically scanning and milling on the same day? Temple and NYU is, everyone else is not.
    i. Do you have a dedicated faculty/digital technician? Temple and Maryland does
h. Do you teach margin elevation? No, schools require sound tooth structure.
    i. If so, What material do you use?
i. In your school are micro-etchers introduced? Not in operative
    i. If Yes - for which procedures?
j. In your school are the pre-clin students introduced to working on natural teeth? NYS Schools- no. Rutgers, Temple, Tufts, and UCONN- yes
    i. If yes - for which procedures? How are the natural teeth "sterilized" prior to usage? Either a solution based on school guidelines or autoclave. Rutgers- etch and bond. Tufts- caries excavation. Temple- preps, enamel and dentin etching, caries, diagnosis and removal ad pulpotomy. UCONN- sealants and PRR.
k. Which generation bonding agents are you using?
    i. 5th generation- Stonybrook, Howard, Columbia, Tufts
    ii. 7th- Rutgers
    iii. 8th /Universal- UCONN, Maryland, TCDM, Harvard, NYU
l. What is your success rate with composite restorations at your institution? Data was unclear. Schools do not have accurate data on this.
m. How does your institution ensure that Phase I been completed effectively as an approach for restoration longevity? Assuming Phase I is hygiene and perio, Axium requires a code for this, so that is how Phase I is completed and in somce cases a case complete.
n. Does your school have a separate clinical discipline managing the non-operative treatment phase? Operative faculty to not manage other disciplines.

XV. Student Assessment

a. How to address students with anxiety and overcoming failures- Pretty unanimous that there is Academic Support through student Affairs and Wellness and Health Center in the schools to help students, but the following are unique ideas
    i. Stonybrook- Student Support Center the number is on every syllabus. This center evaluates students and gets them the help they need

ii. Tufts – Wellness and Health come in 2 minutes before every Simulated exam for 2 minutes of meditation.
iii. NYU- has 24 hour Wellness hotline found on the NYU Homepage. They also have a Student Success Network and a Faculty/Student Advisor that meet 1x in the first month of school to check in.
iv. Howard- 24 hour support hotline

b. How do you ensure that completed Sim Clinic projects are the student's own and not passed down from other classes?
   i. NYU, Harvard, Stonybrook- All projects are due and reviewed
   ii. TCDM- projects are collected
   iii. Maryland- certain amount of assignments
   iv. Howard- mark and collected
   v. Columbia- marks and takes pictures
   vi. Rutgers and UCONN- daily assignments are NOT collected
   vii. Temple- Projects are collected, Projects also change year to year.

c. How many Mock Board sessions are you performing?
   i. Columbia- 0
   ii. NE, TCDM, Harvard, Tufts, Temple, UCONN-1
   iii. Howard-4
   iv. Stonybrook, NYU, Maryland- 2
d. Is your state/region permitting or considering the DLOSCE for licensure? No
e. For regional licensure exams, are you opting for live or simulated examinations? Simulated
   i. Do you use prefabricated carious teeth for simulated exams? Yes

XVI. Administration

a. How do you recruit adjunct faculty? Via ADEA forums and word of mouth
b. How do you calibrate/align faculty? This is a challenging area for many schools, however there is an exam at Rutgers, Temple, Tufts, Stonybrook and NYU
c. How do you monitor and manage student learner requests for excused absences related to COVID-19?
   i. (e.g. a student missing multiple exams claiming they were symptomatic yet tested negative each time) NYU- short exams and essay. Harvard- Respondus exam. Columbia still has offsite exams so it is not an issue.
   ii. How do you manage these missed assessments? Up to the course director
d. What opportunities does your institution provide to help develop junior operative faculty?
   1. Tufts- Institutional Faculty Support and Dept level lunch and learns
   2. Rutgers- faculty mentors
   3. Howard- Provost provide seminars
   4. Columbia- Faculty Affairs with a 1 time a year evaluation.

ii. What academic/administrative career trajectories do operative trained faculty typically pursue?

Advancement within the departments. Some clinical positions some pursue Master's degrees.

Region VI

Region VI Answers to National Questions

MUSC: Medical University of South Carolina
DCG: Dental College of Georgia at Augusta University
UL: University of Louisville
NSU: NOVA Southeastern
ECU: East Carolina University
UNC: University of North Carolina
VCU: Virginia Commonwealth University
MMC: Meharry Medical College
UF: University of Florida

School:	Answer:
I. Curriculum:	
e. Were changes (e.g., curriculum or schedule or methods of delivering course content) adopted due to COVID-19 maintained after pandemic related hospitalizations or other signs of community infection rates dropped to safe levels and a return to "normal"? i. Yes or No ii. Explain what changes you maintained.	
f. Are your students requesting (more) videos of operative/restorative procedures post-COVID? i. Yes or No ii. Did you have instructional videos in your preclinical operative courses? Yes or No Do your students access YouTube and similar platforms in lieu of course content?	
g. Has the introduction of new COVID-related courses or course content (e.g., Telehealth, Infection Control, etc.) affected the amount of time devoted to operative dentistry instruction? i. Did your school add new courses/content? Yes or No Did it affect time for operative/restorative dentistry instruction? Yes or No ii. If Yes, how much time (hours or % of course time)?	
h. How many total hours (clock hours or credit hours- specify) are allocated for operative dentistry instruction within the curriculum at your institution? i. Preclinic ii. Clinic	

i. What percentage of your operative/restorative curriculum, if any, is devoted to amalgam restoration technique and to amalgam as a dental material instruction? i. Amalgam technique %? ii. Amalgam as a dental material %?	
MUSC:	a. We continue to provide a Hybrid learning experience. Course materials will be placed on line with a "live" presentation and class discussion. b. i. Yes ii. Yes I have created or "borrowed" videos as needed. Not directly from our course material. c. i. No ii. Not any longer d. i. Preclinic Fall and Spring Semesters – 170 total hours ii. Clinic No dedicated instruction outside of clinical work. e.What percentage of your operative/restorative curriculum, if any, is devoted to amalgam restoration technique and to amalgam as a dental material instruction? i. Amalgam technique %? 25% ii.Amalgam as a dental material %? 25%
DCG:	a. i.No ii. b. i.No ii. iii.Yes c. i.No ii. i. No We don't have enough faculty (post-covid effect) iii. d. i. D1 Preclinic: Fall: 4 Spring: 4 (8 total credit hours) ii. D2: 7 credit hours iii. D3 Clinic Fall: 5 /Spring: 6 (11 total credit hours) e. i. <5% ii. <5%
UL:	a. From the Associate Dean for Academic Affairs: We did six weeks of purely virtual courses/exams from mid-March-May 2020, and delayed completion of the preclinical courses until we could return. Then we did the modified schedule in

	the summer of 2020 to get everything caught up for the preclinical courses. After that, we split the didactic courses into two groups of 60 students each to control the numbers of students in the classrooms and preclinical areas and maintain the 6 foot distance for Fall 2020. Dropped that in Spring 2021, and have been pretty much back to normal operations except with mandatory masks until May 4, 2022. Clinical operations resumed in June/July of 2020, and we created special aerosol pods. Then we were able to modify the HVAC system even more, and have created essential almost negative pressure everywhere. Also used some air purifiers in selected areas, and have added enhanced hospital-level filtration systems and UV light disinfection of air flow in the HVAC system. The Dean stayed on the engineers until they worked out every possible idea to help us make the school as safe as possible for now and for the future. b. i. No – Not in Operative courses ii. Yes iii. There is not a way to determine if they are accessing online aids. Some operative course directors may recommend online videos to their students. c.No i.No ii.No iii. d. i. Preclinical: Preclinical Operative Dentistry I 17 weeks X 8 hr/wk = 136 hours Preclinical Operative Dentistry II 34 weeks X 4 hr/wk = 136 hours Operative Dentistry III (lecture) 9 weeks X 1 hr/wk = 9 hours Total = 417 hours ii. Clinical: D3 and D4 Non-patient based clinical exams (NPBCE) 4 hours X 4 = 16 hours D4 Mock Board 4 hours X 1 session = 4 hours Individual instruction hours in operative dentistry vary within the comprehensive patient care clinic depending on patient needs in the students' patient family e. i. ii. In the preclinical courses, probably 20%. In the clinic, varies with the instructor, Team Leader.
NSU:	a.

	i. No ii. None. Our school returned to normality already. There's only still in place a notification and an excused absence mechanism for students whenever they feel they could be positive and return to school upon negative tests results. b. i. We do not see a lot of difference in these requests. There is some increase in the recent years but we think that it may be a generational change rather than covid related change. ii. Yes, we do but we have limited number of them and not for every technique. iii. We do utilize YouTube materials for demonstration purposes, but we do that rarely because is it not easy to find an impartial video that replicates our protocols exactly. c. i.No ii.No iii. d. i. Preclinic We only have a block of operative dentistry teachings in the first year. In the second year, we only have a few sessions with a couple of hour. If the math is correct, we have a total of 29 clock hours of lectures and 140 clock hours of operative dentistry preclinical labs. That approximately adds up to 11 credits in the preclinical curriculum. ii. Clinic We have the team leader system with comprehensive care clinics from start to finish. Team leaders and supporting faculty take over the responsibility of clinical instruction during clinic hours. It is hard to calculate the operative dentistry instruction hours as clock hours. Our system is also a competency-based system with certain benchmarks. In terms of credit hours in the clinical restorative dentistry component, in the D3 and D4 years, we have Clinical restorative Dentistry Courses and they total up to 25 credits within the dental curriculum. Electronic database reports show that average student graduates with 57 direct restorations on patients. e. i. Amalgam technique %? The percentage of amalgam didactics in our operative dentistry curriculum in the D1 year is 14%. That includes the biomaterials component as well as the technique component. Percentages of amalgam labs is approximately 13% of our operative dentistry labs. We do about 3% amalgam in the clinic. The reason that amalgam preclinic percentage is higher than the clinical reality is because many faculty members believe that teaching amalgam preparations on dentoform would be good practice for the students, due to the more structured format of its preparations. The numbers used to be much higher. In the last years we reduced amalgam labs drastically and we changed the sequence between composite and amalgam. ii. Amalgam as a dental material %? That would be approximately about 4-5% of the biomaterials didactics

UNC:	a. i.Yes ii. Although in-person lectures are back, we continue to share video recordings of each lecture through our learning management system. This way, students have access to both. b. i.Yes ii.Yes iii.Yes c. i.Yes ii.No iii. d. This is under review considering the implementation of the new DDS curriculum. i. Preclinic: 13 credits ii. Clinic: 6 credits (DDS2 + DDS3) e. i. 40% ii. 40%
ECU:	a. i. NO ii. b. i. NO ii. YES iii. Yes c. NO i. NO ii. NO iii. d. i. Preclinic 204 hrs. for Operative and Cariology ii. Clinic – nothing specific, ongoing efforts through the curriculum e. i. 40% ii. 40%
VCU:	a. i. Some ii. As COVID infection and quarantine is still occurring, all lectures are required to be recorded and then shared with any student who has to miss class due to COVID. We also have some of the physical barriers (between lab benches) present in the preclinical laboratory. b. i. About the same.

	ii. Yes iii. c. No. i. safety protocol related to COVID ii. Aside from having to compress what would have been a couple of months into weeks when we first came back from the school closure in 2020 I would say no. iii. d. As our curriculum becomes more integrated, this is more difficult to dissect out. The ADA (CODA) survey no longer requests clock hours for instruction. i. Preclinic: Rest I, II, III, and Adv Restorative & Digital Dentistry lecture and lab combined with fixed pros woven into this same time = 15.5 credit hours. ii. Clinic: D3 clinical operative is 5 CH. D4 Clinical General Practice Dentistry (DENS 752) is 14.5 CH and includes a significant amount of clinical operative work, but is not exclusively operative. e. I do not have percentages on it, but preclinically it is becoming smaller: approximately 1 lecture and lab exclusively on amalgam as a dental material and proper handling, with 5 preparation and restoration lectures and labs all in Spring of the D1 year. The topic will be revisited some in the summer lecture and lab courses regarding larger/core restorations. i. ii.
MMC:	a. Yes b. No i. Yes, but discouraged unless specified by individual faculty. c. Yes, particularly Public Health Courses d. D1 Spring: 60 hours DAU: 16 Hours D2 Fall: 130 Hours Spring: 118 hours D3: Fall 18 Hours e. About 50%
UF:	a. i. yes and no. ii. We have continued with the hybrid model: some classes online and some in person. Also, some assessments and format changes were maintained in zoom (group activities, etc). b. i. The usual: they have always requested more videos, photos. ii. Yes iii. We have the videos in mediasite and Canvas. c. i. No ii. No iii. d. i. Preclinic: 1 term of Dental Anatomy and 3 terms for Operative (each term has 15 weeks). ii. Clinic: 6 terms. e.

	i. 1/6 ii. 1/6
II. Materials and Techniques **a.** Zirconia restorations (preparation guidelines, preclinical and clinical use) i. Zirconia type used (e.g., 3Y, 4Y, 5Y) ii. Preclinic and / or Clinic? Preparation guidelines iii. Restoration Categories taught/used (e.g., Crowns, Inlays, Onlays, Veneers) iv. Monolithic and / or Veneered Zirconia Restorations? v. Anterior and / or Posterior Teeth? vi. Other information (specify)?	
MUSC:	Not taught in "Operative" it is taught in "Fixed Prosthetics"
DCG:	a. i. 5y monolithic, PF-Z ii. both iii. crowns and FPD's iv. both v both vi. including implant restorations
UL:	At the University of Louisville, Operative Dentistry is not responsible for the teaching of zirconia restorations. This is taught in the Prosthodontic curriculum. The preclinical prosthodontic course director provides a PDF that illustrates the preparation, giving the reduction measurements and margin design. Grades were determined by following the ADEX rubrics. Preclinically, the students perform the zirconia/full ceramic preparations but do not fabricate a crown. Clinically, both zirconia and full ceramic crowns are used.
NSU:	a. i. In our school we use 4Y and 5Y around 765 MPA of flexural strength. ii. Only in Clinic iii. Only for crowns if fabricated in school. If case is sent to an external Lab we do Inlays, Onlays and Veneers. iv. Most of the time Monolithic and only Veneered zirconia for esthetic reasons. This modality has been slowly replaced by the new HT Zirconia. v Both anterior and posterior teeth vi.
UNC:	a. i. 3Y and 4Y. More details below. ii. Both. iii. Crowns and Onlays iv. Both v Both vi. Students are taught to distinguish between the different types of zirconia, in the advanced operative course and fixed pros. They are also taught preparation requirements for each type of zirconia, including chamfered/shoulder margins. They are taught how to write a proper lab form

	equesting zirconia restorations based on their yttria content. Based on the attendee, it is encouraged o request 3Y for posterior teeth, 4Y for premolars, also to keep incisal edges and occlusal in nonolithic and layer with feldspathic porcelain facially in esthetically sensitive cases. Full crown preparation is taught in fixed pros course and partial coverage with lithium disilicate is taught in Advanced Operative Dentistry. Bonding protocols are strictly enforced and cementation clinical guidelines are available for students to review prior to delivery.
ECU:	a. i. Taught by pros ii. Clinic iii. iv. Monolithic v. Posterior vi.
VCU:	a. i. we teach the students all existing variation of zirconia ii. preclinic and clinic guidelines are the same *Preclinic guidelines: -Cervical margin is at the free gingival margin to ≤ 0.5 mm incisal to free gingival margin -Cervical margin is continuous with no roughness and the margin is clearly defined -Rounded Shoulder; Cervical margin width is 1.0 mm -Path of insertion/line of draw deviates < 20° from the long axis of the tooth; Taper is 6° per wall -Axial reduction is 1.0 mm; The axial walls are smooth and have clear definition -Planar Occlusal reduction is 1.0mm; Functional Cusp Bevel reduction is 1.0mm -External/Internal line angles are rounded and smooth/continuous -There is no damage to the adjacent teeth and/or gingiva iii. All iv. Monolithic yes, Veneered no v Yes vi. We teach the student how to adjust zirconia restoration and the bonding protocols
MMC:	a.
UF:	a. i. 4Y ii. Clinic iii. Crowns iv. Monolithic v. Posterior vi.
II. Materials and Techniques **b.** Do you teach **"Bulk fill"** direct composite technique? i. If so, what products do you use? ii. Do you use a different photo-polymerization technique to ensure curing vs. incremental fill techniques?	

iii. If bulk-fill is not a standard technique, when would you use it vs. using an incremental fill technique? **c.** Do you teach the **Bioclear** method? See the articles below by the originator of the technique- Dr. David Clark https://www.aegisdentalnetwork.com/id/2011/05/the-bioclear-matrix-and-peg-lateral-treatment https://www.aegisdentalnetwork.com/id/2010/01/the-injection-molded-technique-for-strong-esthetic-class-ii-restorations i. If yes, is it part of the curriculum or main track (standard) operative? ii. If yes, do you use it for anterior and / or posterior restorations? iii. If yes, briefly, when would you use it in place of more traditional techniques? **d.** Do students get exposed to shear bond testing utilizing the **Ultradent** Shear Bond testing apparatus? **https://www.ultradent.com/products/categories/equipment/testing-equipment/ultratester** Yes or No? i. Are your students directly exposed to any other dental materials / dental equipment testing equipment? Such as- Wear testers, Hardness testers, FTIR, Curing light intensity, etc.?	
MUSC:	b. i. Yes. Activa BioActive Restorative Material ii. The material is dual cured. iii. c. i. ii. iii. I would LOVE to incorporate this into the curriculum. I have used it in private practice, and it was a beneficial procedure. d. It is discussed, but I personally believe that microtensile bond strength testing is more "telling" as to true bond strengths of our materials. (ADASCDP has been reviewing this for some time and there seems be a faction who that they would like to see SBS removed from ISO testing standards) i. Many are in their "independent" research projects each year.
DCG:	b. No i. ii. No iii. We don't use it c. NO, we do not teach it i. ii. iii. d.No i. Some students, if they do a materials-related research project
UL:	b. It is introduced in the operative course but not done in the clinic i. No specific bulk-fill products are available ii. N/A iii. Bulk-fill has not been shown to out-perform incremental fill so we have not incorporated this technique clinically.

	c. I assume Kevin is referring to a Class II restoration with an infinite margin and dish-shaped preparation. We do not teach the Bioclear method. i. ii. iii. d.No i. No
NSU:	b. i. We teach bulkfill technique and the material we have in the clinic is Surefil SDR Flow+. However we do not have a big emphasis on this technique and we decide on case by case basis. ii. We do not. We follow the incremental technique where we have no more than 4 mm for an increment. iii. We do not have the protocol finalized yet. We have controversy within the department. c. i. We do not teach in the predoctoral program but we teach it in the PG clinics. ii. We mostly use it for anterior restorations, but we also use it in posterior restorations as well. Again, this is in the PG clinic. iii. We do not endorse this technique in place of a more traditional technique especially in the posterior. In certain anterior cases with complex esthetic smile designs, we have used in the past. d. i. No they do not. However, we have a Research Department and a research program that supports predoctoral student research projects. Research is not a requirement therefore participation is voluntary. Those particular students who participate have been exposed to Ultradent shear bond testing in one of the recent studies we did. That goes for other mechanical and physical testing methods and devices.
UNC:	b. i. Surefil SDR ii.No iii. A low-viscosity bulk-fill composite may be used (up to 4 mm increment) for class II composite resin restorations whenever a deep proximal gingival margin is present. A nanofill composite should be placed over the low-viscosity bulk-fill layer. This technique is not taught in our operative preclinical course, but it has been adopted as an option in our Graduate Operative program. c. Not in the operative predoctoral program. The technique is occasionally used in our Graduate Operative program. i. ii. iii. d. Again, I assume this question relates to the predoctoral program. Considering that, the answer is no. i.No
ECU:	b. Yes i. Surefill and X-Tra Fil by VOCO

	ii. NO iii. Currently, bulk fill taught preclinically. In process of making it available clinically. c. NO i. ii. iii. d. Yes, historically. Currently no i. Yes
VCU:	b. We utilize a "bulk fill" composite core material, but also teach the use of regular composite (Filtek Supreme Ultra Universal) for cores. i. Clearfil PhotoCore ii. No iii. Large restorations c. No i. ii. iii. d.No i.
MMC:	b. No i. c. No i. d. No
UF:	b. Yes. i. Bulk-fill flowable (SDR). We don't have bulk fill high viscosity in the clinics. ii. No. iii. Large restorations, gingival margins. c. No i. ii. iii. d. No i. Yes. Curing light Intensity (Marc exercise). Students perform a light curing procedure using the Marc patient experience with a before and after to check improvement.

II. Materials and Techniques

e. How do you teach post and core technique as an acceptable method to restore endodontically treated teeth? Yes or No?

i. If Yes, do you use human or simulated teeth (i.e., Accidental or Frasaco)?

ii. If Yes, is it taught for anteriors? premolars? molars?

iii. If Yes, do you teach cast posts, prefab metal posts, resin posts, ceramic posts?

	iv. What other methods do you teach to restore endodontically-treated teeth, e.g., Endocrowns, chamber-retained cores, other, N/A?
MUSC:	e. i. Acadental ii. Anteriors currently iii. Resin Posts are taught and used. iv. We discuss Endocrowns,
DCG:	e. Yes i. human ii. anteriors and premolars iii. cast posts, prefab metal posts, resin (fiber) posts iv. chamber retained core
UL:	e. Yes i. Acadental ModuPRO ii. All iii. ceramic posts iv. chamber-retained cores
NSU:	e. Yes i. We use human teeth. We also use Acadental for the sim lab. ii. Yes, anteriors and premolars. iii. We teach prefabricated fiber posts and very occasionally (only if lack of ferrule is present) cast post and core. iv. We also teach endocrowns but only didactically in the preclinics. We do endocrowns on selected clinical cases.
UNC:	e. This topic is taught by Fixed Prosthodontics in our DDS program. i. ii. iii. iv.
ECU:	e. Yes, via lectures i.Human ii. All iii. All options are discussed and presented in lectures , one simulation lab in Pros iv. Posts are only taught if the remaining tooth structure can't support a core buildup. They are used infrequently. We do teach about all types of posts and the post type depends on the canal shape, so we conserve dentin. In anterior teeth if a post is indicated, fiber posts are utilized for esthetics. Anterior teeth don't get posts often unless a clinical crown is nearly missing.
VCU:	e. Yes, when indicated. i. Acadental ii. Preclinically is taught on an anterior. iii. Preclinically we used metal pre-fab post. For clinic: Fiber post, Panavia SA, CompCore

	iv. Endocrowns, overlay restorations
MMC:	e. Taught in fixed i. Human teeth
UF:	e. Yes. They have a lecture on Endodontic Treated Teeth to cover all the techniques i. We use Kilgore for our pre-clinical exercises. ii. We taught different indications, but for posterior we indicate more chamber retained core. iii. We teach all the techniques, and hands-on on Casts and Fiber post. iv. Chamber retained core.
II. Materials and Techniques f. Are you doing more traditional impressions than digital impressions (scans)? i. Yes (more traditional impressions) ii. No (more digital impressions) iii. What is the approximate percentage/ratio of traditional vs. digital impressions? g. Are you clinically scanning and milling indirect restorations for patients in student clinics on the same day? i. Yes or No ii. If Yes, do you have a dedicated faculty/digital technician? iii. If Yes, what is the approximate percentage of same day (1 visit) crowns vs. multiple appointment (2+ visit) crowns being done in the student clinics? iv. If No, are you planning on adding this approach to your student program?	
MUSC:	f. i. ii. iii. We use both impression techniques. It is used about 50/50 in the clinics. g. i. Yes ii. We have a dedicated area with faculty. Been attempting to hire a digital technician. iii. Again, this is a separate 3 chair clinic that is scheduled separately from typical Restorative procedures. iv.
DCG:	f. i. Yes (more traditional impressions) No digital at all, for now ii. iii. g. i. Yes ii. Any faculty can help a student but 3 faculty are typically dedicated for QA prior to milling. iii. Right now, we only do 2 appt crown visits. With the change to Digital Dentistry as a school, we will be doing same day crowns. iv.
UL:	f.

	i. Yes (more traditional impressions) ii. iii. I don't know. Operative dentistry does not do digital scans. That is a prosthodontics procedure. g. i. No ii. iii. iv. Not sure. Again, scanning and milling is not an operative dentistry procedure at our school. It is done in prosthodontics.
NSU:	f. i. ii. No (more digital impressions) iii. Approximately, 70 percent of the impressions taken in our pre-doctoral clinic are digital, 30% are traditional. g. i. Yes ii. We train and urge all our clinical faculty to be independent in this procedure. Often times, we can achieve this without the help of our dedicated faculty. However, we have one full time digital faculty, one digital dentistry director and one dedicated dental technician that help our students with their digital cases. iii. Same day crowns are mostly achievable if they are long term provisionals. We would like to think that this is mostly the case. However, it is often a challenge to deliver a milled definitive restoration the same day. If we can get the student to mill the restoration the same visit, that is often a good achievement. Due to the students' slower pace, we often do not have time for the try in and cementation using adhesive cementation technique. Anticipating that, we require our students to come with armamentarium to fabricate a chairside provisional. Depending on the amount of remaining clinic time, we may require the student to make their chairside provisional before they do design and mill procedures which almost guarantees that the delivery will be at another time. If we have a zirconia crown, due to the time it requires, it is automatically a two appointment procedure. We already came a long way on this. We drastically reduced the time that it takes for our students to design and mill a crown chairside. This happened through investments and digital faculty hires. Currently the main obstacle we have is the extended length of time that the students take to complete the tooth preparation. We cannot rush this, and we cannot compromise on this critical step. We think that our curriculum should be shaped in such a way that the students are required to do much higher number of dentoform preparations in the preclinic years and with shorter allocated times. Only with repetition and time limitations they would be able to have the speed for same day dentistry. Unless we achieve that in the preclinical years, we may not be able to reduce the number of appointments needed. iv.
UNC:	f. The answers below relate to the DDS students' experience. i. Yes

	ii. iii. 70/30 (rough estimate) g. i. Yes. ii. Yes. iii. 10% iv.
ECU:	f. i. yes ii. iii. 90:10 g. Yes, in specific scenarios i. ii. Yes iii. NO, in process of formalizing a plan, new faculty hired iv.
VCU:	f. The mix is close to 50/50 i. ii. iii. 50/50 g. i. Yes ii. Yes iii. I would say we are close to 50/50 iv.
MMC:	f. Yes, but we are doing scans on selected cases g. i. We have one faculty member as the go to person but all faculty have undergone training
UF:	f. Pros i. Yes (more traditional impressions) ii. 85/15 g. i. Yes ii. No iii. iv. We have a group of faculty members that can cover the Cad-Cam clinic, but the goal is always to increase and reach a point that anyone can cover.
II. Materials and Techniques h. Do you teach "deep margin elevation" techniques? As described by these references https://www.tcbsc.net/pdfs/Magne_DME.pdf https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8947734/ i. If Yes, what material do you use to elevate the margin?	

ii. If Yes, do you use this technique for: 1. Direct restorations only? Yes or No 2. Indirect restorations only? Yes or No 3. Both direct and indirect restorations? Yes or No **i.** In your school are micro-etchers/sandblasters (e.g., Danville or Zest) taught/used by students? iii. If Yes - for which procedures? iv. If No, why not? j. In your school do pre-clinical students work on natural teeth as a routine part of their operative/restorative instruction? i. If yes - for which procedures? ii. How are the natural teeth "sterilized" prior to usage? iii. Do your students have to supply their own natural teeth or does the school provide them? k. Which generation(s) of bonding agents are you using? As defined by this reference- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5507161/ i. List all generations used and product examples l. What is your success rate with composite restorations at your institution? i. How do you define restoration success, or failure? ii. Are you routinely tracking composite or other restoration success? iii. If Yes, what is your average success rate for composites done in the student clinics?	
MUSC:	h. i. We have been incorporating dual cured Activa Bioactive Restorative material in this technique. ii. 1. 2. 3. Yes i. i. Not at this time. ii. Lack of equipment j. i. Yes, for various restorative procedures. ii. Autoclave iii. Students provide. k. i. We are currently using a Universal Bonding agent (All Bond Universal) in total etch or selective etch modality. l. I don't have an answer for that. i. ii. iii.
DCG:	h. i. Yes, We use RMGI only for directs

	ii. 1.Yes 2.No 3. i. i. Yes; For sclerotic dentin Class VI and occasionally for the repair of porcelain crowns with composite ii. j. i.yes; Caries removal, pin placement, Endo ii. The school central sterilization facility uses steam to process them iii. The students supply them k. i. 4th generation. Optibond FL is the most common product used l. i. ii. iii.
UL:	h. No. i. ii. 1. 2. 3. i. No. i. ii. j. No. i. ii. iii. k. i. 5th generation (etch and rinse) ExciTE-F by Ivoclar l. i. Restoration exhibits no secondary caries, no fracture, no marginal deficiencies, no wear, no postoperative sensitivity, anatomical contact ii.No iii. Not sure of percentage but very few replacements
NSU:	h. No, currently we talk about this technique in one of the lectures but do not routinely adopted it in the clinics. i. ii. 1.

	2. 3. i. i. Yes, we have Danville device. We use them for indirect restorations. Especially for long term provisionals such as lava ultimate. We do not do it for zirconia. ii. j. No, not for routine operative dentistry instructions. i. We only use it for dental anatomy labs (tooth identification) and cariology labs (caries detection and treatment planning exercises). The students do not do any invasive procedures on extracted teeth. ii. We utilize the CDC's protocol for extracted teeth for teaching/research. iii. The school supplies them. k. i. We only use 4th Generation bonding system in our clinics. We use OptiBond FL distributed in uni-doses for every restorative procedure. l. i. We don't see a high number of failures. A failure is defined by a clinically unacceptable restoration due to clinically open/ questionable margin, radiographic or clinical sign of secondary caries, shade mismatch, post operative sensitivity, fracture, debonding or lack of proper occlusal contacts. ii. To assess the process, we have a code created to track every time a composite restoration needs to be replaced or repaired. We lack of a better more specific mechanism to assess the causes. iii. We are in the process of getting the latest data.
UNC:	h. Not in the operative predoctoral program. We will discuss during our 2022 Operative Faculty Retreat the possible addition of this topic to our Restorative 3 course (former Advanced Operative Dentistry course) along with other indirect techniques to be delivered in the Summer of 2023. i. Direct composite (conventional or flowable) combined with immediate dentin sealing. If conventional is used, preheating it with Calset facilitates its handling and application minimizing the risk of bubbles/gaps. ii. 1. 2. 3. Yes (Most of the cases indirect, but also direct). i. i. Yes. Composite resin repair and surface treatment of immediate dentin sealing prior luting (this topic is taught only to the Graduate Operative program). ii. j. i. For partial caries removal protocols ii. They are autoclaved. iii. Yes. k. i. Two-step self-etch adhesive with selective enamel etching technique.

	l. i. Failure – restoration in need of replacement. ii. No. Recently, however, we have retrospectively looked at the survival of direct restorations placed in our predoctoral clinics (restorations placed between 2003 and 2012). Records of 5,155 restorations were assessed. iii. AFR were 3,4%, 6,0%, 7,4%, and 8,8% for 1-, 2-, 3-, and 4-surface posterior composite resins, respectively.
ECU:	h. NO i. YES I. Sealants and NCCL's j. NO i. ii. 10% formalin solution iii. No, school provides k. i. Optibond FL 4th generation l. i. ii. iii. Not formally tracked for percentage. Success is defined with no post op sensitivity, no secondary caries for 6-8 years.
VCU:	h. Yes, for select cases. Our Director of Biomaterials is working with Perio on guidelines. i. Filtek Supreme Ultra Flowable and Filtek Supreme Ultra Restorative. Adequate dental dam isolation, greater curvature matrix bands, meticulous adherence to manufacturer instructions ii. 1. 2. 3. yes i. We do not have the products listed, we use a prophyjet i. Cleaning pits/fissures, removing heavy stain, removing provisional cements ii. j. Not for Restorative, but yes for preclinical endo. i. Pre-clinical students complete their threshold endodontic exercises on extracted teeth, however the technical assessments are completed on plastic teeth (to standardize the exam grading). ii. Most teeth are stored in formalin when they are collected. In general, once at school they are briefly kept in NaOCl to disinfect the teeth. iii. In endodontics, students are encouraged to collect extracted teeth prior to the course. There are often some teeth left over from previous years. The school typically does not provide extracted teeth for pre-clinical labs in endodontics. k. i. 6th Generation: Clearfil SE Bond 2 Unit Dose and 4th generation Optibond FL l.

	i. Success is based on the national average for life span ii.No iii.
MMC:	h. No i. i. Yes cementing ceramic crowns i. j. i. No k. Generation 8 l. Better than the rate coming from the outside which is probably less than three years
UF:	h. No, this topic was removed due to the difficulty in simulating using the dentoforms. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8947734/ i. ii. 1. 2. 3. i. i. ii. No. Not a specific reason. j. In some. i. In Dental anatomy= teeth identification. Operative 1= bonding exercises; Cariology= ICDAS training and caries removal exercise. ii. Autoclaved and after stored in Chloramine solution 0.05%. iii. The students supply their own teeth. k. i. Optibond FL (4th generation) and Clearfil SE (8th generation). l. We are currently investigating the failure rate. i. Longevity ii. Yes, using iDinc to report issues. iii.
II. Materials and Techniques **m.** How does your institution ensure that "Phase I" or preliminary preventive / direct restorative treatment been completed effectively as an approach for restoration longevity? i. Define Phase treatment at your school ii. How do you ensure that it has been completed effectively? **n.** Does your school have a separate clinical discipline managing the non-operative treatment phases instead of or in addition to operative/direct restorative dentistry? i. Yes (e.g., Prosthodontics) or No	
MUSC:	m. i. Management and control of all cariously affected teeth.

	ii. Currently Axium prevents them from moving on, but the Attending must review the case before each procedure to be sure that they are not "jumping the gun" n. i. No
DCG:	m. i. 1. Phase I- Initial Assessment and Disease Control 2. Phase II- Preventive, Perio, Operative 3. Phase III- Prosthodontics and other advanced Restorative ii. We have an internal code to ensure that this phase is complete- D0003 n. i. No, In the junior clinic operative treatment occurs in Operative chairs, however when we have been short on faculty, prosthodontic faculty have been covering direct restorations.
UL:	m. i. Phase I is disease control, excavation of caries and direct restorations of amalgam and/or resin composite, non-surgical perio. Phase II is indirect restorations, prosthesis, implants. ii. There are reviews at the end of Phase I and Completed Case Reviews. We do not follow cases long term. There are reviews if the patient comes in for recall visits. n. i. Yes
NSU:	m. i. Our school has protocols of diagnosis and treatment planning well stablished to address proper identification, treatment, and prevention of oral disease. We approach CAMBRA principles in our school by means of identifying and assessing patient specific conditions. A proper preventive treatment plan is created and incorporated into the optimal and alternative comprehensive treatment plans discussed and presented to faculty and patient. All treatment plans are developed in phases starting with the Initial phase of treatment or disease control phase. During this phase, caries control, stabilization and prevention happens and only when this phase has been accomplished the student moves to the definitive phase of treatment during which definitive restorations and completion of treatment plan takes place. Upon completion of treatment plan, every student must complete a Treatment completion code that includes another assessment of risk factors and disease control, results attained from preventive therapies implemented and changes that may be needed to adjust preventive measures to the new oral conditions. If during initial diagnosis and treatment planning definitive options cannot be determined due to extent of disease or lack of cooperation a Disease Control treatment plan is approved and upon completion and re-evaluation, definitive options and comprehensive treatment plan may be developed. ii. We have a strict rule that before the prosthodontic phase begins, we need reassess to make sure that the caries disease is addressed and the patient is active caries free. WE also need to make sure that periodontal cleaning is up to date. If certain teeth were under reevaluation period, we also need to make sure that the prosthetic decisions have been revised based on the patient's behavior change/ tooth's response to preventive treatment. Once the pre-prosthetic re-evaluation code is

	completed in Axium, that shows us that the team leader assured the completion of preliminary preventive / direct restorative treatment. n. i. Yes, we have a Department of Prosthodontics.
UNC:	m. i. At UNC ASOD, a control phase treatment consists of non-, micro-, and minimally-invasive management protocols, based on the patient's caries risk assessment, and lesion activity/progression. Preliminary preventive/direct restorative treatment is not advocated at all at UNC ASOD. ii. n. No. Our goal is to have the attending faculty in the DDS clinic calibrated on the current concepts/strategies relative to Caries Diagnosis/Management. Regular calibration sessions and modules on these topics are held on an annual basis at UNC ASOD. i.
ECU:	m. i. Students complete an outcomes of care appointment at the end of all treatment, but patients are eviewed holistically prior to definitive phase treatment. Periodic exams are completed every 6 nonths for all patients undergoing comprehensive care no matter what stage of treatment. At this ppointment, updates are made to pending treatment along with a review of previously completed reatments. Treatment that is needed to be redone within a 2-year period is put through a clinical fee djustment process through the office of clinical affairs. This data is pulled for quality control review. i. t ECU SoDM, comprehensive dentistry is practiced within a general dentistry model. All treatment hould be linked to a diagnosis and phased and sequenced in the AxiUm program. 5 phases of reatment including: Systemic, Acute, Disease, Definitive and Maintenance phase are the defined hases of treatment. Phases of treatment build upon each other, with an emphasis on completion and ull management of disease control phase prior to moving to definitive phase. ii. t ECU SoDM, a GPG (Generalist Practice Group) model is utilized to provide oversight and tailored ttention to our student and patients as they navigate through comprehensive treatment. The GPG eader works in conjunction with a Patient Care Coordinator to ensure patients are progressing hrough their treatment in a timely manner and that treatment plans are being adhered to. Students omplete an outcomes of care appointment at the end of all treatment and if no recommendation are oted, a case complete code is completed to signify a patient is in recall status no longer undergoing ctive treatment. n. i. No
VCU:	m. We have an ODCT (Oral Disease Control Therapy) code that is entered into axiUm and this code is approved by Faculty when this procedure is complete. i. Students take 3 treatment planning courses which teach/reinforce phased treatment planning. 1) Emergency Phase 2) ODCT 3) Evaluative 4) Reconstruction 5) Maintenance

	ii. Per our Clinical Manual: Upon completion of the Oral Disease Control Phase of Treatment, students will complete the Oral Disease Control and review it with the designated faculty. Once approved, an entry will be made in the EHR stating that "ODCT was completed and approved by the supervising faculty." Individual treatment plans following the 1-5 steps are generated. Treatment cannot move to the next phase until the previous phase has been completed. n. i. *
MMC:	m. Recalls and perio maintenance assessments with the Perio Department n.
UF:	m. PTA-DC (disease control form completed= evaluation by Operative, Perio and general dentist/ Team Leader). i. In 2022, it was changed to systemic phase, urgent/acute phase, stabilization phase, rehabilitation phase, maintenance phase. ii. PTA-DC and PTA-CC. n. i. No
III. Student Assessment a. How to address students with anxiety and overcoming failures? b. How do you ensure that completed Sim Clinic projects are the student's own work product and not completed by their classmates or passed down from other classes? c. How many Mock Board sessions are you performing, what do they include and when do you schedule them? i. Do you use prefabricated carious teeth for simulated exams? ii. Are these required participation activities, and how do you motivate students to take them seriously? iii. Is it part of a required course grade or just for their benefit to enhance their success rate? d. Is your state/region permitting or considering the DLOSCE for licensure? Reference: https://jcnde.ada.org/en/dental-licensure-objective-structured-clinical-examination#:~:text=The%20Dental%20Licensure%20Objective%20Structured,more%20dental%20problem%20solving%20tasks. i. Yes or No e. For regional licensure exams, is your school or are your students opting for live patient or simulated manikin examinations? i. Do you use prefabricated carious teeth for simulated exams?	
MUSC:	a. This is a difficult issue, but one that must be handled so that the student understands that we are there to guide and help them on this journey. Discussion is had after the patient has been dismissed and in a quiet and respectful manner b. Currently, we use a University Code of Conduct that is enforced. I personally have not had a problem with this issue, that I am aware. c. I believe there are two – three that occur each year. i.Yes

	ii.Motivate. iii. Not that I am aware. d. i. Not aware that we are at this time. e. Simulation i.Yes
DCG:	a. Accommodations for students who qualify Student Counseling and Psychological Services (SCAPS) Student Health also offers counseling Meetings with students who are identified by course directors as struggling students and/or students who contact our office requesting help We also offer Emotional Intelligence assessment and feedback, the DiSC assessment and lectures that include dealing with anxiety/stress. b. Honor code c. In the senior year. Three sessions and schedule them in January/February with practice sessions as well. i. We use the teeth that are similar to the boards for mock boards so prefabricated caries in them ii. Yes, they are required. Quizzes, lectures, and also the chief examiner also speaks to students prior to the boards. iii. Both a required course and to enhance their success. d. i. No, not at this time e. Simulated i. Yes
UL:	a. The academic progress of dental and dental hygiene students is very important and is monitored at the ULSD. Students are encouraged to pursue options available to them to receive academic tutoring or counseling. Academic Support Programs - These programs are designed to assist dental and dental hygiene students to successfully progress through the University of Louisville School of Dentistry. Academic Support Counseling - Tutoring Program - Academic Support Counseling Academic support counseling is offered to UL School of Dentistry students. Students may receive counseling for the following: - Study skills and methods - Time management - Organization - Test-taking skills

	- Memory skills - Stress management Tutoring Program - To request a tutor, the student contacts our Academic Support Counselor. Alternatively, the course director may notify the Counselor when a student needing help is identified. The Counselor will meet with the student briefly to discuss the academic needs, study habits, and personality, prior to matching the student with a tutor. Once matched, the tutor will contact the student by phone or email to arrange for the first meeting. The student will then work with the tutor to arrange tutoring sessions to fit his/her individual needs. About the tutoring program - Peer tutors may be recommended by course directors to be tutors. - Students interested in serving as tutors may choose the subjects they are willing to tutor. - The tutoring service is free to the students being tutored. Tutors are paid an hourly rate for tutoring and work with dental and dental hygiene students. - Tutoring helps the tutor to prepare for board exams. - Methods the tutor may use while working with the student include: sharing study suggestions they found to work for them, asking questions about course material, and using or developing diagrams and drawings for memory aids, etc. Students who wish to discuss their study skills individually and confidentially may contact our Academic Support Counselor b. For practical exams, the teeth are marked. For projects, we do not have a standard method. c. One Mock Board session for the initial exam includes Operative dentistry and prosthodontics. One retake session for operative dentistry failures. If there are additional operative dentistry failures, they are retaken in the Operative Competency Clinic. i.Yes ii. They are required activities and must be passed in order to participate in regional clinical exams. iii. It is not required for the course, but it is a requirement for graduation. d. i. No, not that I am aware. e. So far, this is the students' choice. i. They are used for some, but not all exams. For preclinical Operative, simulated carious teeth are used for one experience, not an exam. For the D3 and D4 students, they are used for non-patient based clinical exams.
NSU:	a. We have The Office of Student Affairs and Services that are in direct communication with the students that are struggling with anxiety or failure issues. This office works very closely with The Office of Academic Affairs to determine what the course of action would be to both accommodate the student's needs, while making sure that their education is not compromised. These individuals refer the students for professional help and also notify course directors/clinical faculty of their excused absences.

	b. On certain projects, we mark the graded assignment/ typodont tooth with a bur. We do not do it for every single sim lab project. c. i. Yes, we used them for the first time this year in the D1 Operative Dentistry module, in addition to the mock exam that we did in the D4 Boards Course. ii. Yes, the whole class were required to take one Class II and one Class III simulated exam on carious teeth. iii. D1s did it as a required course grade, D4s in the Boards preparation did it to enhance their success rate. d. i. No e. We did both this year. i. Yes. As boards move more to a Typodont based with simulated caries we are planning to incorporate them more and more to our preclinical exercises.
UNC:	a. The Office of student Life at Adams School of Dentistry engages in recruiting peer tutors who help students that are struggling with course work. Upperclassmen who perform well in didactic and practical work are recruited as tutors each year and compensated for their time. Students who deal with anxiety are encouraged to reach out to the Director of Student wellness who does one-on-one counselling, Assistant Dean for Student Life or any faculty/peer mentors to explore strategies to overcome anxiety. b. We encourage students to complete their coursework while they are in the lab under faculty supervision. A handful of students may not be able to meet this deadline, but we make sure that their work is signed off by faculty assigned to their group, who is familiar with their work. This way, if there are inconsistencies, they are identified early on. c. i. ii. iii. It is part of a required course grade. d.No i. e. Manikin examination i.Yes
ECU:	a. We meet, coach, mentor, and counsel. We also work with learning specialists and Assoc Dean for Student Affairs. b. Only skills assessment teeth are formally marked for authentication. Daily projects are checked live as they are working but work that is presented after the lab, is based on honor code. c i. Only for mock boards ii. They are required to attend and pass to be able to sit for the actual boards. iii. Required d. i. NO

	e. i. DTX Caries simulated
VCU:	a. Meet with students and referral to Student Services Dean and Division For Academic Success if seems appropriate. b. We cannot know for 100% as they are allowed to work outside of class. However, they do sign a pledge and also the completion of daily projects is a requirement to pass the course but does not numerically contribute to the course grade. c. We have mock boards for Pros (crown preps on 3,5 & 9), Endo (8 access, obturation & 14 access) and Restorative (Class 2 & 3) scheduled approximately 3 weeks before the actual exam. i. We use carious teeth for the Restorative mock exam. ii. We hope to generate motivation when we grade their mock exams, We also conduct remediation sessions to help those that failed the mock exam(s). iii. Restorative and Pros mock exams are used for assessments in a D4 clinical course. Endo is not. d. The state of Virginia is not considering allowing the DLOSCE for licensure. i. e. There are no plans in Virginia to return to patient based exams. Therefore, all future mock boards are planned using simulated carious teeth for restorative purposes. i.
MMC:	a. We have A CEDS Department for the college that will handle educational and study issues and deal with learning issues as well b. They are evaluated at each session c. We have a course that encompasses multiple procedures restorative and fixed and a final mock board including endo d. Not sure e. Simulated i. Yes
UF:	a. We use the Office of Advocacy and Inclusion to help students with anxiety. We also have the tutoring program. b. We sign the routine sheet daily even in the presence of critical error or not completion indicating a failure for time management. It is the student's responsibility to use office hours to get the make-up signed (not mandatory). c. One mock board session with 3 simlab sessions of practice before. i. Use the acadental teeth. ii. Practice is mandatory for the ones that are not in rotation; mock boards is mandatory for all. iii. Yes, part of a course. d. i. No e. simulated manikin examinations i. Yes.

IV. Administration

a. How do you recruit adjunct faculty? *(Adjunct = volunteers vs. Part-time or paid faculty)*

i. How many adjunct faculty do you have compared to full-time faculty?

	ii. What is the range and average amount of time your adjunct faculty teach? iii. How many part-time (paid) faculty do you have compared to full-time? b. How do you calibrate/align faculty teaching efforts? c. How do you monitor and manage student learner requests for excused absences related to COVID-19? i. (e.g., a student missing multiple exams claiming they were symptomatic yet tested negative each time) ii. How do you manage these missed assessments? d. What opportunities does your institution provide to help develop junior operative faculty? (Junior = inexperienced/early career faculty new to dental education) i. What academic/administrative career trajectories do operative trained faculty typically pursue? (Graduates of operative programs e.g., Boston, NSU, UNC, UF)
MUSC:	a. i. 20% ii. ½ to 1 day per week. iii. I don't' have that answer. b. We have created educational modules to help all faculty stay current and calibrated. c. This is handled by our Office of Student Affairs. i. ii. d. There are various orientation sessions, and regular "junior faculty " meetings to help them assimilate to the academic culture. i. Not exactly sure how to answer this. Many are on tenure track to advance in the College.
DCG:	a. Adjunct faculty recruiting usually occurs informally at dental meetings or CE courses or at alumni functions, typically during one-on-one conversations with dentists that we know. i. In operative: 4 ii. Once a month iii. Restorative Sciences Department Staffing Levels as of August 2022 Total Clinical Faculty= 35, Full-time (50% Teaching effort) = 24, 0.20 - 0.80 FTE = 5, Deans & others with < 0.20% teaching= 3, By Discipline: 13 Prosthodontists, 18 Gen Dentists, 4 other (Radiologist, Screening Clinic Director, 2 Deans do not teach) b. Calibration: operative section meetings c. i. We are not allowed to ask for proof of a positive test. We have to take their word for it. They are required to report their positive result to AU student health. ii. The students will be provided an opportunity to make up missed assessments. Often these occur on Wednesday afternoon where there are no scheduled classes or clinics for predoctoral students. d. Most faculty are assigned mentors or experienced faculty to advise them about most departmental and some school protocols and expectations along with the chair. A school-wide new faculty orientation occurs in the fall and spring where they are introduced to key committees and our research programs. Academic and Clinical software programs and technology training is scheduled for new faculty or it can be arranged by request.

<table>
<tr><td></td><td>i. Operative training candidates usually are foreign training and Georgia does not accept that. Their academic carriers will be outside Georgia.</td></tr>
<tr><td>UL:</td><td>a. We do not have gratis faculty that I am aware of.
i.
ii.
iii. 38 full time faculty and 15 part time
b.
<table>
<tr><th>Course</th><th>Calibration Efforts</th></tr>
<tr><td colspan="2">Preclinical Laboratory Courses (D1 and D2)</td></tr>
<tr><td>Preclinical Operative Dentistry I
Dr. Whitney</td><td>Grading rubrics are provided for students and faculty for all practical exams and daily projects. These rubrics are included in lab manuals and are also available on BlackBoard. These rubrics contain specific measurable performance criteria that specify what grades will be given if certain criteria are met. Each practical exam requires two course faculty grades which also allows for cross-calibration. Course faculty also participate in operative dentistry calibration sessions held by the Preclinical Program Director.</td></tr>
<tr><td>Dental Anatomy & Occlusion Lab (CMPD 801)
Dr. Eldairi</td><td>Rubrics and performance criteria for grading are available to all students and faculty in the course manual and on blackboard. Prior to every project, the performance criteria is reviewed in a power point presentation to all students and faculty. Prior to every project, faculty meet with course director to discuss trends observed and the methods to approach and evaluate using performance criteria.</td></tr>
<tr><td>Preclinical Operative Dentistry II
Drs. Collins & Crim</td><td>Rubrics for practical exams and projects are sent to all course faculty and students. Due to the nature of operative dentistry, the rubrics contain objective, measurable performance criteria that are used during instruction and grading.
Videos of the preparation and the restoration of the Class II slot, Class V, and Class III are posted on Blackboard for viewing by students and course faculty members.
Two course faculty grade each practical exam or project and they are able to cross-calibrate during the assessment. Additionally, the course faculty participate in operative dentistry calibration sessions held by the Preclinical Program Director.</td></tr>
<tr><td>Removable Partial Dentures Lab (CMPD 841)
Drs. Haake/Metz</td><td>Assessment forms and associated grading rubrics for formative daily activities and hand-skills assessments are sent to all course faculty and students. Due to the nature of removable partial dentures, the rubrics contain objective, measurable performance criteria that are used during instruction and grading. Weekly one-hour calibration sessions occur immediately prior to laboratory instruction to discuss daily outcomes expectations. All course faculty grade daily formative</td></tr>
</table></td></tr>
</table>

	activities following these calibration sessions to ensure objective feedback. Two course faculty (course directors) grade each hand-skills assessment and cross-calibrate during the assessment. Additionally, the course faculty participate in RPD calibration sessions held by the Preclinical Program Director of Removable Prosthodontics.
Preclinical Pedo Lab (CMPD 873) Dr. Rozo	Faculty and students have online access to the Bb course documents including the rubrics for each project. Each project has a rubric that includes performance criteria and a grading scale. At the beginning of each lab practice, a review of the project and its rubric are completed. The course director provides a calibration session for all residents during their orientation week and an individual project grading session is completed one week before the course starts.
Perio Modular Learning (DXOH 853) Dr. Lowy	Evaluation forms and associated grading guidelines for seminal daily activities and hand-skills assessments are sent to all course faculty and students. Due to the nature of periodontics, the rubrics contain objective, measurable performance criteria that are used during instruction and grading. Evaluation forms are comparable to competency documents that are employed in the DMD clinic and allow for faculty grading and student self-assessment. Course faculty are calibrated in a December meeting prior to the Spring semester. In addition, the course director participates in periodontics calibration sessions held by the Preclinical Program Director of Periodontics.
Preclinical Fixed Pros Lab (RARD 866) Dr. Montero	Project and competency rubrics are discussed in lecture time and posted on Blackboard for students and faculty to review. Rubrics have been developed for criteria to be measurable and objective. Faculty rotate throughout the three different labs so students can receive feedback from different faculty. The course is structured for each student's project/competency to be graded by a different faculty. The program director calibrates and supervises during each of the grading sessions.
Intro to Indirect Restorations Lab (RARD 862) Dr. Montero	Project and competency rubrics are discussed in lecture time and posted on Blackboard for students and faculty to review. Rubrics have been developed for criteria to be measurable and objective. Faculty rotate throughout the three different labs so students can receive feedback from different faculty. The course is structured for each student's project/competency to be graded by a different faculty. The program director calibrates and supervises during each of the grading sessions.

Preclinical Occlusion & TMD (CMPD 802) Dr. D. Maddy	After each lecture and before the day lab the course director has a short meeting with the faculty to review project rubrics discussing any changes, undesirable trends that are occurring in the projects and areas that need more instruction with students. Project and competency rubrics are discussed in lecture time and posted on Blackboard for students and faculty to review. Rubrics have been developed for criteria to be measurable and objective. Faculty rotate throughout the three different labs so students can receive feedback from different faculty. The program director calibrates and supervises during each of the grading sessions.
Intro to Clinical Dentistry II (CMPD 821) Dr. T. Williams	Rubrics and performance criteria for grading are available to all students and faculty on BlackBoard. Rubrics are measurable and objective. Prior to every exercise, the performance criteria is reviewed in a Power Point presentation to all students and faculty. Faculty also calibrate by either attending student lectures or watching the recorded version on BlackBoard and brief meetings with faculty are held before each new exercise. Course faculty also participate in operative dentistry calibration sessions held by the Preclinical Program Director.
Preclinical Complete Dentures I Lab (CMPD 846) Drs. Marrillia/ Richardson	The Pre-doctoral Course Directors for Complete Dentures provide on Blackboard all course faculty and students with detailed rubrics for lab projects. The rubrics contain objective, measurable performance criteria that are used during lab instruction, grading, and student self-assessments. Faculty also calibrate by attending student lectures and pre-lab meetings of faculty. Each grading day for projects begins with all faculty present to review rubrics prior to grading together in the same grading room.
Clinical Courses (D3 and D4)	
Clinical Operative Dentistry I and II (CMPD 814/815) Dr. Eldairi	- Rubrics and performance criteria for clinical operative dentistry are available on blackboard to all clinical operative faculty, students, and team leaders. - Power points with rubrics objectives are always updated and shared with D3 and D4 students and faculty via email and posted on blackboard. - Prior to every examination, a meeting is called with all faculty graders to update on rubrics and methods of evaluation. - All clinical examinations and exams are graded by 2 graders which assures faculty to remain calibrated. - Updates are communicated immediately to all faculty and students via emails.
Clinical Removable Partial Dentures I	The department chair for the department of comprehensive dentistry hosts a BlackBoard organization that contains all clinical course information including assessment forms, grading rubrics and clinic

and II (CMPD 842/843) Drs. Metz/Haake	manual. These documents are available for all faculty to review and become familiar with expected course outcomes in clinical removable partial dentures. Additionally, the department chair hosts an annual retreat where all faculty are updated on changes to clinic course curricula in RPD. All formative NPBCE are graded by two calibrated removable prosthodontics faculty that host quarterly calibration sessions. All formative PBCE are graded by calibrated dental faculty that have attended all quarterly calibration sessions hosted by predoctoral program director in removable prosthodontics. During these quarterly calibration sessions, faculty interobserver agreement is evaluated on a standardized simulated case. All competency assessments are graded by the two clinical course directors and the predoctoral program director for removable prosthodontics.
Clinical Preventive Dentistry (CMPD 861/862) Drs. Metz/Vaught	The department chair for the department of comprehensive dentistry hosts a BlackBoard organization that contains all clinical course information including assessment forms, grading rubrics and clinic manual. There are training videos on caries detection, diagnosis, risk assessment and management for faculty to review. These documents are available for all faculty to review and become familiar with expected course outcomes in clinical preventive dentistry. Additionally, the department chair hosts an annual retreat where all faculty are updated on changes to clinic course curricula in prevention. All formative PBCE are graded by calibrated dental faculty that have attended all quarterly calibration sessions hosted by the clinical course directors in clinical preventive dentistry. During these quarterly calibration sessions, faculty interobserver agreement is evaluated on a standardized simulated case. All competency assessments are graded by calibrated dental faculty that have attended all quarterly calibration sessions hosted by the clinical course directors in clinical preventive dentistry.
Clinical Pediatric Dentistry (CMPD 874) Dr. Martinez	The Pre-doctoral Program Director for Clinical Pediatric Dentistry provides all course faculty and students with rubrics for practical exams and clinical assignments. The rubrics contain objective, measurable performance criteria that are used during instruction, grading, and student self-assessments. Faculty are able to cross-calibrate during each practical exam or clinical assignments. All competencies are graded by calibrated dental faculty that meets each semester to discuss and calibrate for students' performance. Prior to every semester, all faculty meet with course director to discuss trends observed and the methods to approach and evaluate using performance criteria and possible outcomes of upcoming semesters.

Clinical Periodontics (DXOH 855) Dr. Katwal	Faculty Calibration • All periodontal part-time as well as full-time faculty are calibrated. • The calibration is done quarterly in a case base form as well as in clinic. • Team leaders who are performing these evaluations have been calibrated utilizing diagnosis criteria. Each group of team leaders was calibrated together. The PowerPoint has been emailed to the team leaders.
Clinical Fixed Prosthodontics (RARD 868) Dr. Brock	The Pre-doctoral Program Director for Fixed Prosthodontics provides all course faculty and students with rubrics for practical exams and projects. The rubrics contain objective, measurable performance criteria that are used during instruction, grading, and student self-assessments. Faculty are able to cross-calibrate during each practical exam or project.
Clinical Complete Dentures (CMPD 848/849) Drs. Metz and Harris	The department chair for the department of comprehensive dentistry hosts a BlackBoard organization that contains all clinical course information including assessment forms, grading rubrics and clinic manual. These documents are available for all faculty to review and become familiar with expected course outcomes in clinical complete dentures. Additionally, the department chair hosts an annual retreat where all faculty are updated on changes to clinic course curricula in CD. All formative NPBCE are graded by calibrated removable prosthodontics faculty that host quarterly calibration sessions. All formative PBCE are graded by calibrated dental faculty that have attended all quarterly calibration sessions hosted by predoctoral program director in removable prosthodontics. During these quarterly calibration sessions, faculty interobserver agreement is evaluated on a standardized simulated case. All competency assessments are graded by the two clinical course directors and the predoctoral program director for removable prosthodontics.
Clinical Fixed Prosthodontics I and II (RARD 868) Dr. Brock	The Pre-doctoral Program Director for Fixed Prosthodontics provides all course faculty and students with rubrics for practical exams and projects. The rubrics contain objective, measurable performance criteria that are used during instruction, grading, and student self-assessments. Faculty are able to cross-calibrate during each practical exam or project.

c.

i.

ii. From the Associate Dean for student Affairs:

Student Affairs records these absences; individual course directors determine if the absence is excused or not.

Student Affairs sends an email to all course directors and clinical staff that need to be notified.

	Per university policy and mandate from the President and the Provost, no student should be penalized in any way for absence due to illness and we were to accommodate all students that were absent due to COVID related issues as well (e.g. experiencing COVID-19 symptoms, exposure to a close contact, and/or a positive COVID-19 test…). We always accommodated students even before pandemic for any type of illnesses or excused absences. We have followed our protocol https://louisville.edu/dentistry/files/COVID-19-protocol.pdf During the pandemic any student that tested positive for COVID-19, has been a close contact with someone who tested positive, or had any symptoms was required to notify our Infection Control Officer and she would advise them on the next steps. They would also have to provide doctor's note. d. Formal degree training: M.S. in Health Professions Education, University of Louisville Offered through a partnership between UofL's School of Medicine and College of Education and Human Development, the online Master of Science in Health Professions Education is designed for healthcare professionals who plan to teach in their respective discipline—medicine, nursing, dentistry, pharmacy, or other health fields—and prepare to become effective educators in a clinical or classroom setting. Delivered through flexible online courses, the program helps develop the educator and advances their expertise in curriculum design, learning assessment, educational research, and inclusive teaching practices. In service: Calibration sessions for preclinical and clinical procedures. i. There are only two operative faculty with advanced operative training (MSD degree) - One is currently a department chair but continues to teach on a limited basis. - One was a department chair and Associate Dean for Academic Affairs and continued to teach preclinical and clinical courses while in those roles.
NSU:	a. i. In our department we have 33 full time faculty and 25 adjunct faculty members. That means that 43% of our department is adjunct faculty members. ii. We have adjunct faculty members that teach half a day a week, one day a week, 2 or 3 days a week. By rules, we cannot have them cover more than 3 days a week. Depending on the skillset and our operations needs, their days differ. Most of them come 1 day a week. iii. Our school does not accept part time faculty anymore. You can either be a 4/5 day full time faculty or be an adjunct faculty. b. We calibrate the faculty on didactic knowledge. We do not have a specific training on teaching styles. Both in the sim lab and in the clinic, we have a chance to work together with faculty side by side. Therefore, we observe their teaching efforts. We address it if there is anything to correct or align. c. i. We have an Office of Student Affairs and Services. We also an Infection Control Director that the students are required to contact for Covid related absences. Once the students have clearance and excuse by these individuals, we get a notification about the days that they will be missing. If the

	students miss that date, then we contact them to extend their excused absence or this will be counted as an excused absence. These rules apply to covid cases and/or other infections with covid like symptoms. We are required to provide make up opportunities for any exam missed. ii. We cannot simply pick a date for make ups. We need approval and clearance from Office of Academic Affairs on the make up exam date and conditions. They look at the student schedule and sim lab availability then give us possible dates for making up missed assessments. d. i. NSU's Operative Dentistry Program is closed now. We currently have one full time junior faculty that graduated from our operative dentistry program. We also have one other faculty that finished an operative dentistry program. Both faculty members are team leaders, so they are clinically oriented. Additionally, they get involved with research and lecturing on operative dentistry subjects for the predoctoral and post graduate students.
UNC:	a. i. 5% ii. It varies, but typically one day per week. iii. 10% b. The Operative Dentistry predoctoral program holds regular Faculty Retreat sessions for discussion/alignment on preclinical courses content, dental materials/techniques used in the DDS clinic, etc. At the Dental School level, regular calibration lectures are recorded and available to current/new faculty on the UNC School of Dentistry's website. c. i. All our students are encouraged to get tested at the Campus Health Unit. Campus Health sends notifications to schools regarding extended isolation periods/medically prescribed leave. Students are only allowed 4 absences (4 days) per semester and are required to get prior approval from course faculty if they plan to miss exams/assessments. In case of suspected honor code violation, students are asked to produce proof of reason for absence. ii. The Office of Student Life approves absences for the DDS program. If a student intends to miss an exam or assessment, they will need pre-approval from concerned faculty to receive an excused absence. For excused absences, faculty will work with them to make up the assessment. In case of unexcused absences, faculty are not obligated to do so. This information is presented in the ASOD absence policy, and the administration holds an annual presentation to remind students about related policies. d. Initiatives such as the "Dedicated Faculty Development Day." Several local sponsorship opportunities to support professional development. i. Most of our graduate operative residents will pursue an academic career as Assistant Professor at a Dental School in the US.
ECU:	IV. a. i. 7 Adjunct faculty, 6 paid part time faculty, 23 Full Time Faculty ii. One day a month. No range. iii. 6 paid part time and 23 Full Time.

	b. We have a centralized repository of lectures and protocols available to all faculty. Faculty Development seminars offered all year long. We schedule incoming new hires in pre-clinical courses to calibrate their clinical interaction. a. i. The Office of Student Affairs maintains records regarding reported student absences through a Qualtrics survey. Despite the office of Student Affairs being the hub for housing these requests, the Associate Dean of Student Affairs does not exclusively excuse or approve absences. The module director communicates expectations with the students and helps mitigate any potential absences. The Associate Dean of Student Affairs works in conjunction with course directors and module directors to strategize a plan for success and support for students. Excessive absences are reported to the course director who reports to the Student Progress Committee, which meets monthly and is chaired by the Associate Dean of Academic Success. Students who do not meet attendance requirements may incur academic consequences, including but not limited to: • Receiving a grade of Not Passing (DP) in the 8X30 course. • Being deemed ineligible for remediation or re-examination in a course or module where they otherwise might have been deemed eligible if the attendance requirement had been met. • Being placed on Academic Probation in accordance with Standard Operating Procedure ESFD.008 Student Progress. • Being ineligible to serve as an officer for SoDM student organizations. • Being ineligible to represent the SoDM at professional meetings. Additionally, individual module directors may choose to adopt specific criteria related to the attendance requirement. In these instances, a written statement outlining the details of such criteria will be provided to the students at the beginning of each module. Make-up assessment time is built into the curriculum as well as remote learning environments are employed when possible. Close communication from the student with the module directors is key when formulating a plan c. Depends on individual faculty interest and potential. Historically opportunities such as ADEA Emerging Leaders program, ADEA ITL program via scholarships, Leadership opportunities within the school with faculty council, opportunities to serve in different institutional committees. i. Course / module directorship, Division Directorship, and other administrative opportunities.
VCU:	a. i. ii. iii. b. To my knowledge, most preclinical courses have calibration meetings prior to lab sessions to go over the assignment and expectations; (some Faculty also attend lectures if possible). We also calibrate on our grading prior to beginning grading of Practical exams.

	c. Students contact the course director and are required to follow COVID guidelines. Speaking for preclinical restorative courses, this would be an excused absence. Per the Administration we are to provide any recorded lecture(s) the student may have missed due to COVID. We believe they need to notify Student Health if they have COVID. We cannot penalize anyone academically for COVID related absence. i. ii. All make up exams are taken in the testing center. Make up exams do not need to be identical to the one given on exam day. Exact format is at discretion of course director as outlined in syllabus. Follows same protocol for any other exam missed for illness. Guidelines Governing Exams and Laboratory Assignments policy addresses this. d. It is an expectation that the department chair mentor/help and protect junior faculty members. There are general "onboarding" sessions for general knowledge in processes and policies. i. N/A. VCU does not have such a program.
MMC:	a. Constantly b. We hold summer and periodic calibration sessions c. Assessed by COVID testing site and results reported to Dean of Academic Affairs and Dean of Student Affairs and School COVID czar. Excused absence must be approved by Dean of Students i. ii. Makeup work protocols of individual faculty d. We have a Dean's Scholarship Program for obtaining a Masters in Education for Full-time Faculty. We have faculty mentorship. i. Most are non-tenured Clinical. They can be promoted based on Clinical, Service, Research, and Academics in 3 of 4 areas.
UF:	a. Usually by indication. i. Around: 7 part time, 3 courtesy, 14 full time ii. 0.2 to 0.7- average of 0.5 iii. Replied above. b. c. i. At one point, proof was being requested. Currently, it based on trust. ii. Make-up d. Funding and incentives for meeting and professional development, mentoring program. i. Directors, chairs.

Region VI Answers to Regional and CaMBRA Answers

MUSC: Medical University of South Carolina
DCG: Dental College of Georgia at Augusta University
UL: University of Louisville
NSU: NOVA Southeastern
ECU: East Carolina University
UNC: University of North Carolina
VCU: Virginia Commonwealth University
MMC: Meharry Medical College
UF: University of Florida

School:	Answer:
MUSC: 1) Is Vital Pulp Therapy being taught at your College? If so why? If not why not? 2) Have you incorporated "bioactive", antibacterial washes (quaternary ammonium silane) or antibacterial restorative materials (quaternary ammonium methacrylates) into your curriculum? Why or why not?	
MUSC:	We do use VPT and teach bio-interactive materials and use.
DCG:	1) Yes 2) No, we have not had a chance to conduct an evidence-based evaluation of these materials yet
UL:	1) Our definition of Vital Pulp Therapy: a restorative dental procedure that aims to treat teeth with compromised dental pulp without the full removal or excavation of all carious tissue adjacent to the pulp. This procedure is presented in the D3 Operative Dentistry 3 course as it is gaining acceptability in order to preserve tooth vitality rather than complete excavation of deep caries which would result in a pulp exposure. Clinically, it is at the discretion of the faculty. 2) We use chlorhexidine in the bonding procedure following etching with phosphoric acid. Chlorhexidine is an antibacterial agent that has been shown to decrease the activity of MMPs and increase bond durability with several dentin bonding agents.
NSU:	1) Yes, vital pulp therapy Is taught in our school. IN the D1 operative dentistry course, we briefly go into direct pulp capping as we are covering indirect pulp capping protocols. In the D2 year, the students learn direct pulp capping and pulpotomy with the endodontics department. We teach it because both the Endo and the restorative departments believe in the success of vital pulp therapy with proper diagnosis and case selection.

	2) No, we have not properly incorporated this into our curriculum but in the biomaterials class, the students briefly hear about it. This was mostly due to the space limitations and limitations of curriculum change right before the accreditation process. We went through a review of our operative dentistry curriculum, and we were able to create more space to incorporate this and some other topics in the winter 2023 semester.
UNC:	
ECU:	1) YES, in order for the student to know how to preserve the pulp. 2) No, not enough support and buy- in.
VCU:	1) Yes, vital pulp therapy is taught in our preclinical didactic courses in endodontics. The endodontic literature shows very good success rates when calcium silicate materials are used for vital pulp therapy. 2) While the use of MTA in endodontics in our didactic course is addressed, the pre-doc students do not generally use it clinically.
MMC:	1) Yes. History 2) Teaching but not in clinic. Supply chain issues.
UF:	1) Yes. Vital Pulp therapy is taught in Operative 1 and 2 and also in Endodontic courses. 2) No. Gold standard materials (such as calcium hydroxide) presents antimicrobial action due to high pH, so we don't see a need to add another step.
Dental College of Georgia at Augusta University: 1) Digital dentistry content in pre-clinical technique courses. a. Do you have digital dentistry content in your preclinical operative courses? Yes / No If Yes, how many classes/sessions are dedicated to digital dentistry?# _____ What types of procedures or techniques are included? Describe: e.g., Inlays*, Onlays*, Veneers*, Diagnostic Mock-ups, Scanning, Milling, Printing, etc.* specify if Ceramic or Composite Resin-based restorations b. If No, are you planning to add this type of content to your operative courses in the next 2 years? Yes / No If Yes- describe what you plan to add If No- why not? e.g., other disciplines are covering this, not enough time, limited financial resources or expertise to teach it, etc. c. Which discipline/department in your school provides the most preclinical digital dentistry content? Operative/Direct Restorative, Fixed Prosthodontics, Removable Prosthodontics, Other- e.g., Digital Dentistry, Esthetic Dentistry, Dental Materials, or an Advanced Restorative Course (multidisciplinary) d. Is your school doing anything with digital dentistry technology that is innovative or cutting-edge? Yes / No If Yes, please describe 2) Pre-doctoral student clinic grading models a. Do you have daily grading (e.g., feedback/formative assessment) for all clinic procedures? Yes / No If not daily, what is the frequency of this type of feedback? Frequency _____ Or we don't have this type of assessment.	
MUSC:	1) a. No. Covered in a different course

	b. No.. Covered in Fixed Prosth courses. c. Fixed prosth d. Yes We actively scan in clinics, design, and print models, provisionals, C&B, etc 2) a. yes
DCG:	1)Yes a.Two; Inlays; b. Our D-2 Fixed Prosthodontics course covers it c. Fixed Prosthodontics d.No 2) a.Yes
UL:	1) a. No. Digital dentistry is incorporated in preclinical and clinical prosthodontics courses. b.No; other disciplines are covering this, c. Fixed Prosthodontics, d. 2) a. Yes
NSU:	1) a. We have a total of 8 lab hours and 2 lecture hours for digital dentistry during our D1 year. This takes place as we start operative dentistry It is almost like introduction to digital scanning and design. We focus on full contour crown scanning and design. We do not mill or print at this point. It is almost like introduction to digital scanning and design. We focus on full contour crown scanning and design. We do not mill or print at this point. b. We plan to incorporate inlay and indirect resin exercise this upcoming year. c. We have the D1 operative course, D2 CAD/CAM course dedicated to digital dentistry teachings and the D3 cosmetics course. This year, both restorative and prosthodontics departments plan to incorporate digital dentistry into more sessions/ courses. d. Yes, our school now has a dedicated digital dentistry director and their dedicated faculty. We have hired one dentist and one dental technician that are working only on digital dentistry component. We opened our internal dental lab. Our school is now milling most of the crowns (including zirconia), making our own surgical guides and even fabricating digital dentures in-house. Our new administration has put digital dentistry initiative as top priority therefore the support is at a level we never had before. We are in the process of negotiating to buy a Yomi Robotic System. 2) a. Yes , we have a daily clinic grading
UNC:	
ECU:	1)

	a.yes; # 6-10; Digital Scanning , wax up and digital evaluation throughout dental anatomy course, prep , scan, design and mill and cementation during CAD-CAM course in operative b. c. Digital Dentistry is housed in operative. Also, utilized in fixed prosthodontics and ortho. d. Yes, we use it as early as their first month in Dental anatomy for scans and evaluations of their wax up. 2) a. YES for clinic, few preclinical simulation exercises don't have rubrics.
VCU:	1) Yes a. We have once-weekly 2 courses (lecture and lab) Spring of the D2 Year titled "Advanced Restorative and Digital Dentistry". Although these courses heavily emphasize digital dentistry, they do receive some introduction on it a few times in the curriculum prior to these courses. All of the above. b. Dental photography c. Both are in the same department, General Practice: The Course Director of the Advanced Restorative and Digital Dentistry courses has a Masters in Operative Dentistry. Our Prosthodontist Faculty Course Director of Preclinical Restorative III also provides material/instructions on this as well. d. We are in the testing phase of obtaining a digital scan of all patients at the school of dentistry 2) a. Yes
MMC:	1) a. Yes _D3 Clinic Rotation___Digital Dentures are taught in D2 Removable Complete Course___ All Ceramic Crowns, Scanning, Milling, Ceramic Use Omnicam b. If No- why not? Faculty time is a factor c. Operative d. No 2) a. Yes
UF:	1) a. Yes (1-lecture and 4 onlay preparation sessions and 1 psychomotor exam and 2 scan, design, mill sessions and 1 resin cementation sessions) Inlays*, Onlays*, Scanning, Milling, (Inlays, partial and full coverage onlays), (e-Max and Lava Ultimate) b. c. Operative d. Yes (working to integrate digital into the student clinics more with both Operative and Prosthodontics faculty involved – we currently have a dedicated clinical area for same day milling procedures and some student clinic scan and send to lab procedures)

	2) a. No – not specifically for digital dentistry procedures) Students have to complete 2 assistant codes and 1 CAD-CAM experience. (not daily)
University of Louisville: 1) What method(s) do you use to test for pulp vitality? How accurate are vitality tests? 2) Research has shown that diet can influence oral health. Specifically, can omega-3 supplements have an impact on oral health that would be important to operative dentistry procedures? 3) Do you use any electronic devices such as iPads or Tablets when grading in operative clinic? If yes, what program do you have?	
MUSC:	1) Cold, electronic, palpation , percussion 2) Was not aware of this. Interesting 3) No
DCG:	1) a. Percussion b. Cold c. Electric Pulp testing (EPT) The accuracy or reliability of these tests is increased when combined with each other and in conjunction with periapical radiographs and patients' symptoms. 2) No response- we have not reviewed this research 3) No, we use Axium on the computers in each operatory
UL:	1) electric or thermal pulp testing Systematic reviews suggest that there are a limited number of well-designed and well-executed clinical trials on the diagnosis of the true status of the pulp. A combination of different clinical tests and symptoms will be required to ascertain the best possible strategy to clinically diagnose true pulpal conditions. Effectiveness of diagnosing pulpitis: A systematic review. Int Endod J. 2022 May 10. doi: 10.1111/iej.13762. Online ahead of print. Cold pulp testing is the simplest and most accurate of all dental pulp sensibility tests. Evid Based Dent. 2019 Mar;20(1):22-23. Laser Doppler flowmetry and pulse oximetry seem to have high accuracy in detecting vital and nonvital teeth and perform better than cold, heat, and electric pulp testing. A systematic review. The Journal of the American Dental Association. 2018; 149 (11), e152. 2)Yes Does the use of omega-3 fatty acids as an adjunct to non-surgical periodontal therapy provide additional benefits in the treatment of periodontitis? A systematic review and meta-analysis. J Periodontal Res. 2022 Jun;57(3):435-447. There was a significant benefit in the periodontal clinical parameters with the use of omega-3 supplementation compared with SRP alone/placebo. An oral health optimized diet can reduce gingival and periodontal inflammation in humans - a randomized controlled pilot study. BMC Oral Health. 2016;17(1):28. A diet low in carbohydrates, rich

	in Omega-3 fatty acids, rich in vitamins C and D, and rich in fibers can significantly reduce gingival and periodontal inflammation. Omega-3 fatty acids as an adjunct for periodontal therapy-a review. Clin Oral Investig. 2016; 20(5):879-94. Dietary supplementation with fish oil could be a cost-effective adjunctive therapy to the management of periodontal disease. 3) Uof L does not currently use electronic devices in clinical grading of operative dentistry but the perio faculty have used iPads for several years.
NSU:	1) We use pulp sensibility testing as thermal tests in the form of a cold test initially (Endo Ice Refrigerant Spray by Coltene/ tetrafluoroethane (TFE)). This is followed by Electric Pulp Testing. They have fairly high accuracy levels. However, both are very technique sensitive. The didactic component of this test plays a major role in its accuracy. If not done correctly, there may be false positives and false negatives. 2) Research has shown a positive impact on Omega 3 and Omega 6 supplements on periodontal health, although not as effectively as actually consuming foods that are rich in these. It also showed some limited antibacterial effects on various strains of bacteria including S. mutans.At NSU, we have a lecture dedicated to nutrition and its effect on cariology and oral health. This lecture is taught within the Cariology course. However, we do not endorse the use of Omega 3 supplements as an antibacterial agent/ anticaries supplement or a factor in operative dentistry decisions. 3) No, we use desktop computers in every station and through Axium, the grading is conducted and incorporated for data management including grades.
UNC:	
ECU:	1) Cold, EPT, Percussion, visual, radiographic eval , tooth sleuth even though reliability factor is debatable. 2) Not familiar with this information 3) Yes, Xcomp(Proprietary to ECU)
VCU:	1) Standard tests: electric pulp testing and Endo-Ice (cold). Cold testing has been shown to be 85-90% accurate in the endodontic literature and the EPT has been shown to be 75-80% accurate. 2) 3) Yes: a google form.
MMC:	1) Hot, cold, percussion, radiograph 2) ? 3) Desktops at each station
UF:	1) We use in the DMD clinics the cold test and EPT. The students should always be guided by the cold test over EPT. 2) There are still some gaps to be answered in regards the role of omega-3 in oral health. 3) No. We use axium and the desktop from each operatory.
NOVA Southeastern: 1) As a part of the CODA requirement, how do you assess CODA Pre-doctoral standard 2-24 d (Health Promotion and Disease Prevention) in your curricula? 2) Do you currently have an honors program or an elective course in Advanced Operative Dentistry Techniques?	
MUSC:	1) We employ caries risk assessment for each patient,

	Diet analysis, and patient education. 2) No, but looking into this.
DCG:	1) We currently have several competencies used to address this standard. These include Oral Hygiene Technique & Instruction, Scaling & Polishing, both performed on adult patients and a Prophylaxis and Fluoride Competency and a Sealant Competency for pediatric patients. Prior to the competency there is content in over 10 courses addressing this topic. 2) No, but we have an Esthetic Dentistry course, where we teach advanced techniques with direct restorations in the fall of the D-3 year.
UL:	1) 2) No
NSU:	1) We currently have (just implemented) a Summative Assessment in Health Promotion and Disease Prevention. On a regular basis our D3 and D4 students have been assessed formatively on this standard during data collection and treatment planning steps while in clinic. The framework used for this purpose is a Caries risk assessment and a preventive treatment plan we have incorporated into Axium. All D3 students, during fall or winter semester must complete a required Caries risk assessment and a preventive treatment plan before any treatment plan discussion and presentation with faculty and patient. This year we added a summative assessment (ICPA) that consists of developing a preventive treatment plan with the proper prior risk assessment using CAMBRA principles to comply with standard 2-24 d. These formative and summative experiences facilitate full comprehension and application of the topic. They also allow to assess students' autonomy addressing oral disease prevention and health promotion. 2) We do not have an Honors program and/or an elective course in Operative Dentistry but we are considering it. We would love to collaborate with schools that have it.
UNC:	
ECU:	1) **Introduction** Emphasis on prevention of oral and dental disease begins early in the curriculum with first year modules in the General Dentistry Curriculum (Operative Dentistry and Cariology), and in the Periodontology module. This emphasis continues throughout the curriculum at several levels in an integrated manner. During the Operative Dentistry Preclinical module (8X20) students learn the basic cariology foundation to understand caries as a disease process with a special focus on treatment based on risk factors. The prevention and control of dental caries is emphasized through several lectures, preclinical and hands-on exercises. Lectures span from introduction to cariology, nomenclature and caries classification, to understanding the disease process histologically and microbiologically along with detection modalities, Caries lesion staging, risk factors leading to understanding the risk associated ultimately leading to a comprehensive treatment plan. Students are engaged in seminars, patient case discussions, along with lab and clinical experiences. The module is designed to enhance and foster active student learning, critical thinking, problem solving, and use of evidence-based information for dental caries detection, diagnosis, risk assessment, and prevention. Several laboratory hands-on sessions (i.e., Apple Decay Project /pH testing exercise/ICDAS lab) and seminars (chemotherapeutic interventions for medical management of dental caries) help instill the

	value of non-surgical management of the disease and how to utilize these modalities to their patient's best interest. As a continuum to the lab sessions and seminars, a hands-on Chemotherapeutic Interventions Clinic is also conducted, where students group together as patient and provider and personally experience the utilization of several chemotherapeutic and preventive products (i.e., disclosing tablets, high content fluoride toothpaste, mouthwashes, fluoride varnish, xylitol products, and fluoride foam products). They also learn to show correct tooth brushing techniques, oral hygiene instructions and write prescriptions for various types of high content fluoride toothpastes and chlorhexidine products. By doing so, they practice how to interact with their patients and comprehend the usage of each of the products. This helps them in gaining confidence and presenting the options with more certainty as a provider. Students also perform hands-on activities with sealants, silver diamine fluoride and resin infiltration as advanced preventive options. In the Fundamentals of Periodontology (8120.01 and 8220.04) several student encounter units (SEUs) and preclinical exercises are devoted to identifying and discussing epidemiologic and etiological factors associated with diseases of the oral cavity, and the immunological response of a patient with a focus on the importance of disease prevention through patient education. The student learns how to evaluate a patient's risk for periodontal disease and how to design a preventive oral health plan to fit an individual patient's needs. Health promotion and disease prevention is also presented throughout the COHP curriculum. The following modules provides instruction in disease prevention and oral health promotion. **8440 – Introduction to Oral Epidemiology** The purpose of this module is to introduce the student to the basic principles and methods of epidemiology and demonstrate their applicability to dentistry. Students will practice using epidemiology to better understand, characterize, and promote health at a population level and study the epidemiology of diseases affecting minority and underserved populations. This module will engage the students in active and collaborative learning through group activities, individual projects, case studies, and group discussion. **8540 - Dental Public Health** This course supports core competencies in dental public health with students gaining knowledge and experience in concepts of prevention and its applications in dental public health. Prevention of diseases at the population/community level rather than at the individual level will be emphasized and compared. Prevention and promotion of oral health disease in underserved populations are emphasized. **8640 – Motivational Interviewing/Behavior Change** Students participate in behavior rehearsal and role-playing scenarios with other students, facilitated by faculty, that include dentist-patient, student-patients, student-faculty and dentist-staff

	interactions. The small group sessions are supported by lectures that cover communication skills, motivational interviewing, the health belief model, and methods of behavioral change. Using tobacco cessation for contextual background, students identify evidence-based health promotion materials and learn to utilize them and apply the didactic concepts in their small group sessions that include three students in the role-playing scenarios, taking turns as the patient, the dentist, and the auxiliary. During the course of this module, students have multiple opportunities to practice tobacco cessation counseling with standardized patients. Students receive feedback on their communication skills from members of the faculty, their peers and the standardized patients. **8740 - Service-Learning** The goal of the Service-Learning module is to provide DMD students the opportunity to apply skills learned early in the DMD curriculum to serve North Carolina residents through preventive oral health lessons. Discussion of Perinatal and Infant Oral Health, Early Childhood Caries, and Caries Management by Risk Assessment is also discussed in the Pediatric Dentistry portion of the preclinical curriculum. Predoctoral students are required to complete treatment plan presentations in Xcomp project grader. Students must provide a full assessment of patient, provide objectives, and complete a treatment plan module that includes a plan for caries management and education on disease prevention and good health practices. They are also required to present the treatment plan to parents to include oral hygiene education. Toward the end of the D3 year students are required to successfully complete a treatment plan OSCE/CIE for pediatric dentistry to confirm competence in treatment planning. **Instruction** **Related Preclinical Modules:** 8X20 – Operative Dentistry & Cariology 8X20.01 and 8X20.04 – Fundamentals of Periodontology 8X20.16 – Pediatric Dentistry 8X40.01 – Introduction to Public Health Dentistry 8X40.02 – Introduction to the Evidence Base for Oral Health 8X40.03 – Oral Disease Prevention and Health Promotion 8X40.04 – Leadership, Cultural Competence, and Community Engagement 8X40.05 – Patient Safety and Quality Improvement 8X40.06 – Oral Health Care Systems 8X40.07 – Oral Health Policy, Advocacy, and Interprofessional Care 8X40.08 – Oral Health in North Carolina **Assessment** **Basic Didactic Exams (multiple choice) that include evaluation of Health Promotion and Disease Prevention**

	There are roughly 20 multiple choice exam questions from health promotion and disease prevention and preclinical lectures in related courses. **Case-Based Reports that include evaluation of Health Promotion and Disease Prevention** Health promotion and prevention represent components of many of the clinical medicine, oral medicine, and treatment planning cases. It is an impracticability to tease out prevention and promotion from these cases because of the interrelatedness of these components with other dental disciplines. **Problem-Based Reports that include evaluation of Health Promotion and Disease Prevention** On average, the Class of 2015 generated approximately 10 points per student (roughly 100 Yammer posts) involving health promotion and disease prevention. These are formative assessments only. Some students discussed the topics more than other students. **Clinical Quantitative Assessment that includes evaluation of Health Promotion and Disease Prevention** Students accumulate approximately 100 points from traditional preventative procedures. Because preventive techniques are required before any definitive treatment can be provided, students are ensured in meeting basic minimal thresholds. **Pre-Clinical Skills Exercises that include evaluation of Health Promotion and Disease Prevention Assessment** 1. 07E - CARIOLOGY - SKILLS EXERCISE - Chemotherapeutic Interventions **Clinical Skills Assessments that include evaluation of Health Promotion and Disease Prevention** Preventative techniques are a component of the following Clinical Skills Assessments: 1. 8X50.01.01 – GEND – Diagnosis & Treatment Planning 2. 8X50.03.01 – OPER – Non-Surgical Caries Treatment 3. 8X50.05.06 – PERI – Periodontal Documentation 4. 8X50.05.07 – PERI – Periodontal Scaling and Root Planning 5. 8X50.05.08 – PERI – Evaluation of Initial Therapy 6. 8X50.05.09 – PERI – Periodontal Maintenance 7. 8X50.16.02 – PEDI – Pediatric Caries Management 2) No
VCU:	1) Our dental students are assessed in multiple ways and over all four (4) years. We have formative assessments and competency assessments. In general, early parts of the curriculum (D1 & D2), these concepts are included in written examinations and case presentations in such courses as Infection & Immunology, and Cariology, Periodontal Therapy I & II. This preclinical information provides an important foundation as the students advanced into the dental clinic and begin treating patients for major dental disease, periodontal disease and caries. In addition, we have courses specifically designed for the students to learn effective patient communication skills when working with patients. These courses teach and assess motivational interviewing and explore best practices associated with oral health and enhanced behavior change to adopt these practice in the later part of

	the curriculum, generally the third and fourth year. We use standardized patients in these exercises in motivational interviewing. Students are assessed on their ability to elicit motivation to improve oral health. In pediatric dentistry, again motivational interviewing is used, in addition to caries risk assessment. In general dentistry, students must develop a comprehensive evidence-based treatment plan and/or referral plan(s) based on etiologic factors, current oral disease risk analysis, standards-of-care strategies, and biomedical and clinical scientific knowledge. As an end point to competency development over the four (4) years students are deemed competent in Health Promotion and Disease Prevention by competency assessments in multiple areas, including sealant placement, caries risk assessment, periodontal diagnosis, treatment planning, scaling and root planing. We use multiple assessments for this standard. One is our Behavioral Learning Clinical Competency Assessment which uses standardized patients and a check list assessment looking for specific behaviors/interpersonal skills in a patient interaction. Patient education is one component of this assessment and may include smoking cessation, nutritional counseling, hygiene instruction etc. Here are other places we assess 2-24.d Pediatric Sealant Competency Pediatric Dentistry Treatment Planning Competency Caries Risk Assessment Competency (being re-implemented) Radiographic Diagnostic Interpretation Competency Periodontics Written Competency Perio Scaling and Root Planing Competency Perio Exam and Treatment Planning Competency 2) We have 2 Senior Selective courses: CAD/CAM Selective Pilot and PROS 700 - Selective in Advanced Clinical Prosthodontics.
MMC:	1) 2) Yes D3 year first semester 18 hours
UF:	1) We currently have a SPT for Perio and caries management plan competences for Operative. 2) No.
Virginia Commonwealth University: 1) Do you utilize live demonstrations in the pre-clinic lab? Do you use high quality clinical IO photography examples of all ideal or close to ideal tooth preparations to match the diagrammatic and dentoform preparation examples during D1 operative lectures? 2) Do you selectively remove caries on the pupal/axial walls to avoid pulp exposure? Providing that the cavity preparation has a peripheral seal zone (i.e. 2-3mm wide circumferential caries free zone). What are the pulp capping materials used in your clinics, if you use any?	
MUSC:	1) When possible; Yes 2) We employ Vital Pulp Therapy Principles. If there is a vital exposure, stop the bleeding with 2%NaOHCl, remove necrotic pulp tissue stop bleeding with 2% naOHCl, place Biodentin, and restore. For deep non-pulpal preparations, LimeLite Enhanced is placed and FiteBac antimicrobial is used prior to final restoration
DCG:	1) Yes, we use live demonstrations, videos and clinical photos that match dentoform procedures

	2) Yes, we selectively remove all caries in all locations, and some carious tissue may be left to avoid an exposure if a peripheral seal zone can be achieved; Ultrablend or Dycal with VitreBond and Fuji II LC occasionally.
UL:	1) Yes; We have some photographic examples but not for all D1 procedures. 2) This procedure is taught in the D3 Operative Dentistry 3 course. Its clinical use is at the discretion of the faculty.; Calcium hydroxide and RMGI.
NSU:	1) Yes, we do live demonstrations in our sim lab setting. In our lectures, we include high quality photography examples for ideal tooth preparations, but most are dentoform preparation examples. We have a very limited number of clinical images to match those. We do not have a rich library of intraoral high quality photography. We should prioritize that. 2) We do selectively remove caries to avoid pulp exposure. In our preclinical courses we teach staged caries removal protocols. In the clinic, this is determined on case-by-case basis and only on vital, asymptomatic teeth. Our pulp capping material of choice is Biodentine by Septodont.
UNC:	
ECU:	1) Yes, we do live demos. 2) Yes, we do use selective removal caries in preclinical and clinical.
VCU:	1) [live demonstrations]: Sometimes. [photography of ideal preps]: Rarely. 2) Yes. Dycal.
MMC:	1) Yes The student kits have mini-stone models with various preps 2) pulpal. Yes Dycal
UF:	1) We have live demonstrations in the Simlab, mostly for Operative 3 (esthetic cases: veneers, Class IV restorations, etc). Yes, we do have photograph examples for ideal and critical errors. 2) Yes, we do selectively caries removal up to leathery in D2/D3 lesions and up to firm dentin in D1 lesions. We use calcium hydroxide covered with Vitrebond.
Meharry Medical College: 1) A. When and what techniques do you teach for isolation at your school? What do you find to be the most successful techniques? B. Do you recommend a technique for composite restorations or modify a technique for composite resin restorations? C. How do you isolate for posterior restorations that are subgingival or modify a technique for composite restorations that may go subgingival? D. Are you seeing a high number of composite failures especially posterior composites coming to your school practice and what have you assessed to be the causes? 2) A. When do you introduce digital platforms (eg. CEREC) into your educational program? B. Do you have digital platform clinical or manikin procedure requirements or experiences? Addendum Question: Have you had to deal with illegal dentistry being performed in your state or area?	
MUSC:	1) A. We use rubber dam, or IsoVac systems. Students like Isovac a great deal. B. Isolation is critical, and students can choose one of the above for the procedures. C. We have been teaching deep margin elevation, used when possible. D. We improved lights used, isolation techniques and FiteBac use. 2) A. First year.

	B. Yes; Not that I am aware.
DCG:	1) A. a. Rubber dam isolation b. IsoVac c. Cotton roll/parotid shield (or dry angles) B. The standard isolation technique for composite restorations is a traditional rubber dam (a split dam when a traditional application is impractical). Other techniques are used very selectively as long as continuous chair-side assistance is available. C. We use rubber dam with a retraction clamp (e.g., #212), another alternative is IsoVac combined with retraction cord D. Not too many as we used to see 20 years ago, when the majority of the failures were proximal contact, voids and secondary caries. 2) A. Students are exposed to digital restorative dentistry techniques in the first semester of the D-1 year and their exposure and use increases with each year resulting in the fabrication of several indirect restorations with digital workflows in the D-4 year. B. Addendum: We do on occasion have to remediate dentists that have been in trouble with the board. RE: Illegal dentistry, we are not involved in the investigations that take place, however, we do support the board in an advisory capacity or with hands-on assessment when requested.
UL:	
NSU:	1) A. We teach absolute isolation using rubber dam isolation. During pre-clinical exercises our students have been trained to use absolute (rubber dam isolation) for all restorative procedures. B. We use the conventional incremental layering technique for composite restorations. C. If during a clinical procedure absolute isolation is not possible (Unable to use clamp on teeth in malposition, most distal tooth, or Class V restorative procedures) a relative isolation would be approved by faculty and then Optragate and Butterfly isolation systems form Ultradent could be used. D. We don't see a high number of failures. To assess the process, we have a code created to approve every time a composite restoration needs to be replaced or repaired. We lack of a more specific mechanism to assess the causes. 2) A. Cerec platform is introduced in the Fall semester of the first year. We have experiences in some courses. We have dedicated CAD/CAM course that the students have manikin procedure requirements. B. In the clinic, in the D3 and D4 years, each student is required to do at least 2 digital platform experiences followed by a clinical CAD/CAM ICPA. Addendum: We are not the faculty members that are directly related with this type of legal issues in our community however, conversations with our administrative faculty show some evidence of illegal dentistry in the South Florida area. There have also been some incidents that the press covers.
UNC:	
ECU:	1) A. We teach all isolation techniques however find rubber dam depending on clinical presentation of the case. B. We teach both incremental and bulk fill for posterior teeth in a variety of techniques for anterior composites. Different matrices, pull through, indexes, layering technique.

	C. We don't teach deep margin elevation. In sub-G margins that cannot be appropriately isolated with rubber dam, retraction cord or Teflon tape, a sandwich technique with glass ionomer will be considered for composite restoration or consider amalgam as the material of choice. D. Yes, technique issues, indications and delivery. 2) A. First month of dental school during dental anatomy B. No, we don't have clinical requirements but working on it. Addendum: NO
VCU:	1) A. Dental dam for operative procedures. We also have an Isovac for crown preps or times when a dam cannot be used. We prefer a dental dam. B. We use selective etch, 6th generation bonding agent, and sectional matrices. C. We teach the sandwich technique utilizing RMGI; protocol is being developed with the Department of General Practice and Periodontics on the deep margin elevation technique. D. Posterior composite failure is usually due to improper isolation by the treating dentist 2) A. D2 B. We have the D2 Advanced Restorative and Digital Dentistry laboratory course that has project requirements on typodont/manikin. There are also a certain number of CAD/CAM crowns for clinic. Digital is also taught in D2 Fixed Prosthodontics Addendum Question: Not that I know of
MMC:	1) A. Rubber dam, Isolite Rubber dam B. Rubber Dam C. Electrosurgery and isolite D. Lack of good isolation techiques/shallow preps 2) A. End of D2 year/D3 Clinic rotation B. Not yet
UF:	1) A. We teach rubber dam, isovak, combination of Optragrade with cotton rolls. The most successful is the rubber dam. B. Depending on the case, we suggest the modified anterior isolation with rubber dam. C. Adaptation of clamps. D. We are currently running a research on failure rate for composite restorations. 2) A. In Dental Anatomy (first semester). Then again in Operative 3 (semester 4). B. Yes. Pre clinical- 1-lecture and 4 onlay preparation sessions and 1 psychomotor exam and 2 scan, design, mill sessions and 1 resin cementation sessions). Clinical: 2 assists and a cad-cam experience as the provider. Addendum Question: Not aware.
University of Florida: 1) Digital Dentistry: Are there any requirement/# of units to be done digitally? Should they be completed chairside or sent to a lab? Is there a specific clinic/faculty dedicated for CAD/CAM restorations? What system used in your school? Is Digital Dentistry introduced in Dental Anatomy? If yes, using compare or digital waxing? 2) Curriculum integration: What are the strategies used to integrate clinical examples and learning earlier in curriculum without overwhelming students or reaching for a knowledge base that doesn't exist in them yet? How	

is biomaterials content integrated into the curriculum? Is it taught in a specific course or throughout the curriculum? If taught in a particular course, how do you ensure students review and apply this content throughout the curriculum? 3) Assessment: For simulation lab psychomotor hand skills, do you use any sort of student readiness assessment rather than scheduled examinations? Do Students assess when they feel ready? Or maybe faculty certify that a student is ready to take an exam?	
MUSC:	1) Yes, will need to find #'s. Can be chairside or lab. We have a dedicated area for in house work. We have all systems available. Cerac, Planmecca and Trios use are common.I believe DD is. 2) Dental materials and Operative course 3) No, not at this time.
DCG:	1) Yes, at least one crown (scan-design-milling-staining) Romexis (Planmeca); Yes, we started this year, demonstrated creating tooth contours & anatomy digitally 2) Our new curriculum was designed to integrate biomedical and clinical sciences into as many courses as possible. Clinical examples are part of all pre-clinical technique instruction and biomedical sciences are integrated in pre-clinical and clinical courses in bio-clinical seminars and in our various clinical disease risk assessments. Dental biomaterials content is part of all pre-clinical technique courses and we have a distinct course in biomaterials in the fall of the D-3 year with lectures, demonstrations and EBD presentations given by students. 3) No, we are every traditional. We have several weeks of lab exercises and then we have several class-wide practicals scheduled by the course director.
UL:	
NSU:	1) Yes, each student has to do at least 2 digital units followed by a clinical CAD/CAM ICPA (practical exam) to be able to graduate. IN the past, we did not have the manpower to require all to be done in-house to the previous administration was lenient on sending them to the lab. If it was the ICPA, the students would be encouraged to do it in-house but if the restorations were to be sent out to the lab, the students were still required to additionally do the digital waxup for the grading component. Now, we have a digital dentistry director and he has his team of faculty that are also dedicated to the digital dentistry initiative. We have formed an internal dental lab called the NSU Lab. This consists of 3 individuals. Two faculty members and one dental technician. These three people only work on digital cases. WE also have other digitally savvy faculty members and one other dental technician that supports this. We do most of our crowns/ indirect units in-house, including zirconia restorations. Therefore, we are now less lenient to accept required units and practical exams to be sent out to an outside dental lab. Yes, digital dentistry is introduced with dental anatomy as a digital wax up lecture and a lab session. Digital dentistry introduction is critically planned within the curriculum. It follows immediately after the dental anatomy and some initial occlusion labs when conventional wax up is fresh in our students' minds. We currently use the Cerec system and design tools for this but we are considering to supplement those teachings with the MeshMixer software. 2) Our college works constantly creating mechanisms to improve our curriculum. Curriculum integration is one of the most constantly evolving topics. The college has a very active Curriculum committee that each month reviews and suggests changes or new ways of improvement within the

	curriculum. Some of the actions taken are already in place to facilitate curriculum integration. Some of these include that all Basic Sciences courses must have at least 25 percent of their content assessed using clinical situations/examples/scenarios. Basic Sciences courses such as Microbiology and Biochemistry have included lectures that include Periodontology content, nutrition, and prevention (Biochemistry of fluorides). Biomaterials is incorporated into the curriculum with several lectures as part of the IRDS I (Integrated Restorative Dental Sciences) and IRDS 2 during the D1 year D2 year. Students receive a semester of Dental Biomaterials as a separate course too. 3) Yes, in all our simulated lab activities we have created a list of projects that every student must complete before to be assessed with a Mock exercise in anticipation to the summative assessment activity assigned to that specific course such as IPPAs (Independent pre-clinical performance assessment). This helps us to determine with more accuracy when students are ready to undergo these assessments securing more reliable results. These projects are graded but the grades have not numerical value. They serve as a guide for the students to self-measure their level of readiness before other assessments like Mocks exams or ICPAS.
UNC:	
ECU:	1) No requirements currently but looking into it. Yes, cerec. Yes, introduced in dental anatomy. Using digital waxing. 2) No Specific strategy per se. Every preclinical lecture has a clinical application / relevancy to it. Taught through the curriculum. 3) No, tests are previously scheduled.
VCU:	1) No, we do not have a digital requirement, although we strive to have a mix of 50/50 digital/analog fixed units. We have an in-house lab and some restorations are completed chairside. Yes. Trios/3 Shape and Planmeca No. 2) We have 4 years of Dental Biomaterials. In the D1 Year, the Dental Materials course director and Restorative course director try to coordinate so that he can introduce specific topics when needed. For example, he lectures on Bonding/Composites right before we begin that procedure. Other materials lectures are presented during a designated time. Dental Materials courses are independent courses with their own grades. Both: see previous answer. We go back and review the material when we come to that topic. 3) We observe the students working during lab sessions; they also have a Project Workcard with a number of projects that have to be completed to get a passing grade in the course. We have Progression of Competency evaluations where skills can be further assessed, in addition to laboratory practical exams. No. Very rarely, the Course Director(s) may believe that the Class as a whole is not ready for a given Exam and might move it. Again, this is very rare.
MMC:	1) 2 simulated clinical experiences Chairside

	We have all been trained but we have one faculty designated as a go-to person CEREC No 2) Incorporating questions into examinations and follow-up discussions. We have clinical faculty go to basic science course lectures to discuss clinical applications. Throughout the curriculum 3) We have final clinical competency based on a number of completed procedures and we have scheduled clinical competencies for the D3 and D4 classes
UF:	1) (Clinical requirements in our dedicated same-day milling CadCam Clinic are: D3 year – 2 CadCam assists or one case --- D4 year – 1 case) (YES – Primarily Operative Division Faculty trained in digital dentistry) (Planmecca E4D) YES (COMPARE) 2) We have introduced weekly pre-clinical operative clinical cases into our operative II course (preparation and restoration of simple and complex class II lesions) that are reviewed before a simulation lab exercise. The subsequent simulation lab exercise aims to mimic the clinical case as closely as possible. Biomaterials information is initially introduced during our first pre-clinical operative course and continues to be reinforced in subsequent courses. A materials use, guide, and instruction manual is provided to students while they are in their clinical years. Students are expected to be familiar with dental materials prior to providing clinical care. 3) We use a daily routine sheet in sim lab where students are encouraged to take notes on their progress and faculty provide daily feedback. Critical errors or time management issues are highlighted on this form. While this feedback is not used to determine student readiness, it does provide a record of student performance throughout the course.
CAMBRA: Cariology and Operative Dentistry are related fields, but often times in dental school clinics and outside practice operative intervention can be misconstrued as caries management. As educators, we are well aware that fillings do not address the disease of dental caries, and our leading textbooks/experts always advise that disease management (i.e. caries control) should occur prior to definitive restorations. Please discuss what your ideal dental school clinic workflow would look like, from diagnosis/treatment planning to disease stabilization to definitive restorations. What can we do to make this ideal a reality in our schools?	
MUSC:	In an ideal world, there would be no clinical procedure requirements and all care would be solely patient centered to educate the patient as to how their input is essential for success. However, graduation requirements can interfere with this thought process. The need to acquire required items to check off often puts this Cariology process aside. We are trained to "fix". We need to train to assess, educate and empower.
DCG:	In our clinics during the initial exam or recall exam, we do a caries risk assessment, and we prescribe depending on the caries risk. We have an internal code (D0xx) for high caries risk patients where we do a follow -up during appointments

	Regarding treatment, we follow the ADA recommendations. The American Dental Association Caries Classification System for Clinical Practice. JADA 146(2) http://jada.ada.orgFebruary 2015
UL:	
NSU:	Our school has protocols of diagnosis and treatment planning well stablished to address proper identification, treatment, and prevention of oral disease. We approach CAMBRA principles in our school by means of identifying and assessing patient specific conditions. A proper preventive treatment plan is created and incorporated into the optimal and alternative comprehensive treatment plans discussed and presented to faculty and patient. All treatment plans are developed in phases starting with the Initial phase of treatment or disease control phase. During this phase, caries control, stabilization and prevention happens and only when this phase has been accomplished the student moves to the definitive phase of treatment during which definitive restorations and completion of treatment plan takes place. Upon completion of treatment plan, every student must complete a Treatment completion code that includes another assessment of risk factors and disease control, results attained from preventive therapies implemented and changes that may be needed to adjust preventive measures to the new oral conditions. If during initial diagnosis and treatment planning definitive options can not be determined due to extent of disease or lack of cooperation a Disease Control treatment plan is approved and upon completion and re-evaluation, definitive options and comprehensive treatment plan may be developed.
UNC:	
ECU:	Will answer in live discussion.
VCU:	faculty reinforcing caries risk management for every patient at every appointment.
MMC:	
UF:	We currently have the TEAMs model, which allows integration from the different areas: operative, perio, pros, and general dentistry. The hard tissue (diagnosis) is done by operative as well as the caries risk assessment with the preventive treatment. The model is good and we have been working on calibration, which is the biggest challenge.

East Carolina University:

1. Who is in charge of teaching treatment planning (in Operative Dentistry) in your school?

1. 1 If not the Operative Faculty, do you feel there's a gap between your pre-clinical philosophy and the clinical faculty?

1. 2 What strategies do you utilize to minimize this gap?

2. Do you <u>currently</u> teach specific lectures/content in your Operative courses on the following topics:

	YES	NO	Not taught by Operative but covered elsewhere (Whom?)
Dentin hypersensitivity			

/ desensitizing agents			
Pulpal Diagnostics			
Occlusal Guards			
Pulp Protection			
Direct Pulp Capping			
Complex / Pin-retained Amalgams			
Repair vs Refurbish vs Replacement of restorations			
Partial Caries Tissue Excavation			

2.1 If no, how are these topics dealt with in clinic?

MUSC:	
DCG:	
UL:	
NSU:	
UNC:	
ECU:	
VCU:	
MMC:	
UF:	