Approved

VIRGINIA BOARD OF DENTISTRY
BUSINESS MEETING MINUTES
December 11, 2020

TIME AND PLACE:

The virtual meeting of the Virginia Board of Dentistry was called to order at 9:56 a.m., on December 11, 2020, at the Perimeter Center, 9960 Mayland Drive, Henrico, Virginia 23233.

CALL TO ORDER:

Dr. Petticolas called the meeting to order.

Consistent with Amendment 28 to HB29 (the Budget Bill for 2018-2020) and the applicable provisions of § 2.2-3708.2 in the Freedom of Information Act, the Board is convening today's meeting virtually to consider such regulatory and business matters as are presented on the agenda necessary for the board to discharge its lawful purposes, duties, and responsibilities.

Dr. Petticolas provided the Board members, staff, and the public with contact information should the electronic meeting be interrupted.

BOARD MEMBERS PRESENT AT THE PERIMETER CENTER:

Augustus A. Petticolas, Jr., D.D.S., President
Sandra J. Catchings, D.D.S., Vice-President

BOARD MEMBERS PRESENT VIRTUALLY:

Patricia B. Bonwell, R.D.H., PhD
Nathaniel C. Bryant, D.D.S.
Sultan E. Chaudhry, D.D.S.
Jamiah Dawson, D.D.S.
Perry E. Jones, D.D.S.
Margaret F. Lemaster, R.D.H.
J. Michael Martinez de Andino, J.D.
Mike Nguyen, D.D.S.

STAFF PRESENT AT THE PERIMETER CENTER:

Sandra K. Reen, Executive Director of the Board
Jamie C. Sacksteder, Deputy Executive Director
Tracey Arrington-Edmonds, Licensing Manager
Donna Lee, Discipline Case Manager

STAFF PRESENT VIRTUALLY:

David C. Brown, D.C., Director, Department of Health Professions
Barbara Allison-Bryan, M.D., Chief Deputy Director, Department of Health Professions
Elaine Yeatts, Senior Policy Analyst, Department of Health Professions

COUNSEL PRESENT AT THE PERIMETER CENTER:

James E. Rutkowski, Assistant Attorney General

ESTABLISHMENT OF A QUORUM:

A roll call of the Board members and staff was completed. With ten members of the Board present, a quorum was established.

PUBLIC COMMENT:

Dr. Petticolas explained the parameters for public comment and opened the public comment period. Dr. Petticolas also stated that written comments were received from Mr. Matthew Glans and Dr. E. Thomas Elsnter, Jr., which are included in the agenda package; and written comments received from Ms. Beth Cole were sent by email to Board members and the Public Participation list and will be posted with the draft minutes.

Dr. Richard Archer, Senior Associate Dean for Clinical Education, VCU School of Dentistry - Dr. Archer stated that when the Board made the decision to accept all Board exams, portability was the main concern and goal. He recommended that the ADEX exam be the only exam accepted in Virginia because it is a uniform exam, the Board has input on the exam by Board representation, it is an interactive exam, and administered by two different agencies. He also stated that the ADEX exam is accepted in all other states except Delaware and New York.

Dr. Sharon Popp – Testing Specialist for WREB – Dr. Popp encouraged the Board to review the WREB paper that Ms. Cole submitted regarding testing procedures followed by WREB. She also noted that their scorecard was updated to show if the candidate completed a simulated or live patient portion of the examination.

APPROVAL OF MINUTES:

Dr. Petticolas asked if there were any edits or corrections to any of the 6 sets of draft minutes included in the agenda package. Dr. Bonwell stated that on page 21 of the agenda, in the October 23, 2020 Business Meeting Minutes, the last paragraph, line 7, the sentence that starts with "Dr. Bonwell" the word should be "stating" and not "state". Dr. Catchings moved to approve the six sets of minutes with the change noted by Dr. Bonwell. Following a second, a roll call vote was taken. The motion passed.

Ms. Reen informed the Board that the meeting minutes from the two public hearings held on November 13, 2020, are in the agenda package for informational purposes.

ADEX REPORT:

Dr. Bryant stated that the ADEX meeting was held virtually. He reported that the passing rate for the manikin exams and for the live patient tests were very similar at about 94%. He added that the typodont allows testing at different depths which is not possible in the live patient exam. He also said ADEX is working on developing a more natural tooth for the dental hygiene exam.

CITA REPORT:

Dr. Petticolas stated that CITA has not met since the last meeting.

BOARD OF HEALTH PROFESSIONS REPORT:

Dr. Catchings announced her appointment to this Board and stated that she has yet to attend a meeting because her first meeting was cancelled.

DIRECTOR'S REPORT:

Dr. Brown praised Dr. Petticolas for helping Dr. Carey, the Secretary of Health and Human Resources, with various initiatives. He then reported that the Legislative session coming up in January will be a short session, only 30 days. He said no DHP bills are expected to move ahead and that legalizing medical and recreational use of marijuana will be addressed. Dr. Brown also stated that for very potent marijuana, prescribers and patients may be required to register with the Board of Pharmacy.

Dr. Allison-Bryan stated that by the end of the day, the FDA is expected to approve the emergency use authorization of the Pfizer vaccine for the COVID-19 virus, which will be distributed almost immediately to Virginia. She stated that 1A classification healthcare providers, and long-term care facilities' residents and staff will have priority in receiving the vaccination, which will be given by CVS and Walgreen pharmacists. Dr. Allison-Bryan encouraged everyone to go to the Virginia Department of Health's website to learn about the distribution plans for the vaccine in Virginia.

LEGISLATION AND REGULATION:

Status Report on Regulatory Actions Chart. Ms. Yeatts reviewed the updated Regulatory Actions. The following proposed regulations are currently at the Governor's Office:

- training and supervision of digital scan technicians;
- amendment to restriction on advertising dental specialties;
- technical correction to fees; and
- training in infection control.

The regulations pertaining to the waiver for e-prescribing and the education and training for dental assistants II are under review by the Secretary of Health and Human Resources.

Petition for Rulemaking – Scope of practice for dentistry to include administration of Botox and dermal filler injectables.
Ms. Yeatts stated the petition is to amend the regulations to allow general dentists with additional training to administer BOTOX and dermal filler injectables. She recommended that the Board consider the current statute allowing oral maxillofacial surgeons with proper training and certification to perform those functions and review the current definition of dentistry.

After discussion, the Board had concerns about the extraoral administration of Botox and dermal filler injectables by a general dentist and possible complications with patients. The Board also had questions about the specific type of training that would be required of a general dentist.

Dr. Catchings moved to deny the petitioner's request for rulemaking at this time. Following a second, a roll call vote was taken. The motion passed.

By consensus, the Board requested that the petitioners be notified that additional information about training should be submitted to the Board for review.

Adoption of Amendments to 18VAC60-25-40 – Practice by Public Health dental hygienists under remote supervision. Ms. Yeatts explained that the Board is voting whether or not to adopt the amendments to 18VAC60-25-40 as a final action.

Dr. Catchings moved to accept the amendments to 18VAC60-25-40 pertaining to practice by Public Health dental hygienists under remote supervision. Following a second, a roll call vote was taken. The motion passed.

Adoption of Proposed Regulation on Administration of Sedation & Anesthesia.

- 18VAC60-21-291(C) - Ms. Yeatts reviewed the comments received pertaining to requiring a 3-person treatment team for moderate sedation instead of a 2-person team. The Board discussed the current practices and guidelines.

Dr. Bonwell moved that 18VAC60-21-291(C) be amended to require a 2-person treatment team for moderate sedation. Following a second, a roll call vote was taken. The motion passed.

- 18VAC60-21-291(A)(1) – Ms. Yeatts explained this is a request for modification to allow CRNAs to administer sedation in dental offices with non-permitted dentists. The Board reviewed the practices of a CRNA in an outpatient surgery center versus a dental office setting.

Dr. Dawson moved that 18VAC60-21-291(A)(1) be modified to allow CRNAs to administer sedation in dental offices with non-permitted dentists. Following a second, a roll call vote was taken. The motion passed.

- 18VAC60-21-301(E)(2) – Ms. Yeatts stated the Board had to decide whether the required information being recorded should be every five minutes.

Dr. Catchings moved that 18VAC60-21-301(E)(2) be amended to add "every five minutes". Following a second, a roll call vote was taken. The motion passed.

Dr. Catchings moved to adopt the proposed regulation as recommended by the Regulatory/Legislative Committee and amended By the Board. Following a second, a roll call vote was taken. The motion passed.

Following a break, a roll call was taken to establish that a quorum of the Board was present.

Approved

BOARD DISCUSSION/ACTION:

Review Discussion of Clinical Examination Acceptance – Ms. Reen explained her research and findings in developing a draft guidance document requested by the Board to require equivalency across the five regional testing agencies accepted by the Board. Ms. Reen stated that there is no public documentation available to determine if all five exams are equivalent. She explained each testing agency's scoring methodology and standards for testing are proprietary records that are shared only with the dental boards that are members of the respective agency. She said the redacted score cards show there are variances across the testing agencies but they are similar. She said adopting this guidance document will slow down licensure and require that more applications be addressed by Special Conference Committees. She said the Board is and can only be a member of one testing agency. The Board is a member of the Council of Interstate Testing Agencies (CITA) and it is a member of the test development agency American Board of Dental Examiners (ADEX). She added that CITA administers the ADEX exam. These memberships give the Board a voice in test development and implementation by these two agencies.

In response to discussion, Ms. Reen noted that the Board could establish two policies: one for licensure by examination and another for licensure by credentials.

Ms. Sacksteder addressed the Board's March 2020 decision to not accept exam results that were calculated using compensatory scoring and passage of specific categories of the clinical exam. She said that she understands that CRDTS and WREB both do compensatory scoring for some sections of their exams and that there are testing agencies which give candidates the option of taking either the prosthodontic portion or the periodontal portion of the exam.

Dr. Petticolas stated that Board staff was asked to develop a guidance document for the testing exams to determine if there was a level of equivalency, and that was done. The conclusion is that there is not equivalency with the five testing agencies for the different reasons that were stated by Ms. Reen and Ms. Sacksteder.

Dr. Catchings moved to reject the draft guidance document that was prepared pertaining to clinical examination acceptance. Following a second, a roll call vote was taken. The motion passed.

By consensus, the Board requested that the Exam Committee discuss the testing agency exams in more detail, considering a timeframe to require passage of the ADEX exam, and report its findings to the Board.

Ms. Reen requested approval by the Board to hire a VCU consultant to assist the Exam Committee. Dr. Catchings moved to have a consultant work with the Committee. Following a second, a roll call vote was taken. The motion passed.

Bylaws (Guidance Document 60-14) - Dr. Petticolas encouraged the Board members to assist in the biennial review of the Bylaws. He asked for discussion of adding a provision to allow emergency action by the Executive Committee and/or polling each board member when there is a need for emergency action. Ms. Reen explained that the first attempt to take emergency action on the exam requirements for 2020 failed because there was not 100% unqualified agreement of the Board members so it is important to have a clearly defined policy. Discussion supported adding a provision for emergencies. Dr. Petticolas asked for any ideas and said amendment of the Bylaws will be discussed at the March 2021 Board meeting.

Policy on Recovery of Disciplinary Costs (Guidance Document 60-17) – Ms. Reen provided the Board with an update of the costs assessed for the upcoming year, and that there have been no issues with the current process. Dr. Brown stated that the Board of Dentistry is the only board in the Department of Health Professions that does disciplinary costs and he wants to treat all licensees with fairness.

Ms. Reen explained that the Virginia Dental Association was concerned that renewal fees were paying for discipline costs so they pursued legislation to have a statute implemented to assess disciplinary costs. Ms. Reen further stated that the statute is permissive and would not have to be eliminated if the Board wanted to eliminate the fees.

Ms. Yeatts suggested that the guidance document stay in place, but the Board can decide not to collect fees for a certain period of time and then may re-impose fees.

Dr. Bonwell moved to adopt Guidance Document 60-17 as drafted and to not assess disciplinary costs for calendar year 2021. The motion was seconded and passed.

BOARD COUNSEL REPORT:

Mr. Rutkowski did not have any report for the Board.

The Deputy Executive Director's report and the Executive Director's report were suspended for this meeting because a formal hearing was scheduled to take place in 15 minutes. The reports will be discussed at the March 2021 Board meeting.

Approved

ADJOURNMENT: With all business concluded, the Board adjourned at 1:12 p.m.

Augustus A. Petticolas, Jr., D.D.S., President

March 26, 2021
Date

Sandra K. Reen, Executive Director

April 1, 2021
Date

Sandra Reen

From: Beth Cole <bcole@wreb.org> on behalf of Beth Cole
Sent: Monday, December 7, 2020 4:45 PM
To: Sandra Reen
Subject: FW: September 11, 2020 Board Business Meeting Agenda - Corrected Copy
Attachments: WREB Dental Scoring and Decision making overview for VA oct122020.pdf

Hi Sandy,

I noticed that the information you requested on our scoring was not included in the Board packet for your upcoming meeting. I am resending it just in case you think it would help your discussion. Also, because it contains a more updated version of our score report.

Also, in reading your materials I saw in your notes to the Board, a reference regarding membership in testing agencies. I can't speak for other agencies, but WREB does not prohibit a member state from joining and participating in other agencies as well. Virginia is welcome to join and participate in WREB at any time.

I did want to reiterate that our scoring system is conjunctive. The Operative section has a compensatory element, however, as you can see from the score reports in the attached document, one can easily determine that a candidate has passed both of the operative procedures if one chooses not to utilize WREB's scoring protocol.

Please let me know if you have any questions.

Beth

WREB
Beth Cole
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WREB Dental Examination
Overview of Decision-Making Approach and Scoring Determination

WREB ensures that all examinations are scored accurately, fairly, and in accordance with the *Standards for Educational and Psychological Testing*.[1] Practices relevant to examination scoring include the decision-making approach and methods of score determination. An overview of each for the WREB Dental Examination is provided in this document. Additional details regarding the Dental Examination or for related information regarding WREB's Dental Hygiene Examinations are available upon request.

Examination Decision-Making Approach

The terms *compensatory* and *conjunctive* refer to decision-making approaches that may be employed when results from multiple assessments are combined. A compensatory approach averages scores across multiple assessment scores to obtain one final overall score, which allows higher performance on one assessment to compensate for lower performance on another assessment. In contrast, a conjunctive approach requires that performance on each assessment meet or exceed a standard set for that assessment. WREB employs a conjunctive approach to determine the pass or fail decision based on multiple sections of the overall examination. For WREB's Dental Examination, all sections are independent and must be passed at the competency standard for a candidate to pass the Dental Examination.

Methods of Score Determination

The pass or fail decision regarding candidate performance on each examination section is based on the final score, which is derived from a raw score. The raw score is equal to the final score if no deductions or penalties are applied. A candidate's final score on each examination section must meet or exceed the passing score to pass the Dental Examination, in accordance with the conjunctive model of combining results from different tests. Additional details for each examination section regarding scoring are provided, below.

Periodontics Section. The raw score for the Dental Periodontics section is based on the percentage of examiner-validated error-free tooth surfaces. The Dental Periodontics section utilizes error/no-

error grading, where the median grade of the three independent examiners will always reflect exact agreement by at least two of the examiners. For each error that is validated by at least two examiners, the candidate's score is reduced by a proportion of the maximum points available. Penalties (e.g., unacceptable patient submissions) result in deductions from the Periodontics section score, if applicable and validated. A validated critical error (e.g., major tissue trauma) or a finding of egregious performance results in examination failure.

Comprehensive Treatment Planning (CTP), Operative Dentistry, Endodontics, and Prosthodontics sections. Raw scores for the Comprehensive Treatment Planning (CTP), Operative, Endodontics, and Prosthodontics sections are calculated by summing and/or averaging the median of ratings (i.e., grades) assigned by the Grading Examiners for each scoring criterion, according to defined ordinal levels of performance. As described in the previous section regarding the pass/fail decision-making approach, a conjunctive approach is employed for combining results across the different Dental Examination sections; however, a compensatory scoring approach (i.e., summing and/or averaging) is recommended for scoring related tasks and abilities assessed *within* a single test. Median grades are summed and averaged across multiple criteria and procedures, rather than requiring candidates to "pass" every criterion or procedure as if each were a separate test. Unless the candidate's performance has prompted a validated critical error, which results automatically in section failure, it is possible that a small variation from the cut score can be off-set by performance in other areas that exceed the minimal competency definition, to arrive at a final score that meets or exceeds the minimal competency standard. The converse is also possible; adequate performance in one area may be offset by inadequate performance in other areas, resulting in section failure.

Compensatory scoring *within* each examination section is consistent with research on standard-setting methods for performance-based tasks. For example, Hambleton and Slater[2] demonstrated that decision consistency and decision accuracy decrease with the number of separate tasks assessed under a conjunctive scoring approach. Haladyna and Hess[3] also found reliability and rater consistency to be lower with conjunctive scoring of performance-based tasks. They recommend that the choice of scoring strategy be supported by suitable definitions from subject matter experts corroborated by empirical evidence that demonstrates the degree of

relatedness among the scored elements. WREB examination committees review grading criteria, scoring procedures, and criterion weighting regularly. Analyses of content dimensionality and correlations among graded criteria and procedures are also conducted regularly to determine and support scoring methods. Dental grading criteria and procedures within each examination section are highly related, indicating summing and averaging as the preferred approach to scoring. For example, performance on the two Operative restorations is highly related; approximately 90% of attempts, historically, have the same outcome per procedure (*i.e.*, both below the standard for competence or both at or above the standard for competence).

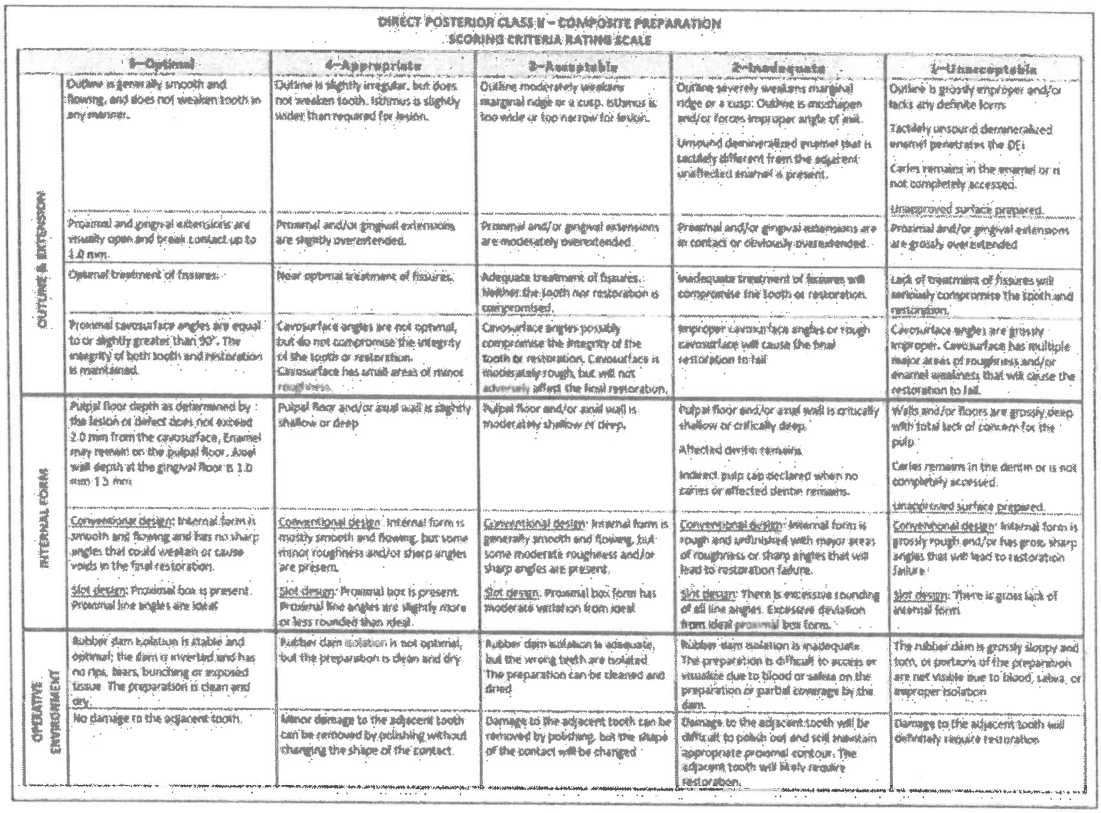
The Comprehensive Treatment Planning (CTP), Operative, Endodontics and Prosthodontics sections are graded according to published scoring rubrics, that define performance at multiple levels for various criteria. Each grading criterion is defined at five (5) levels of performance for each procedure, with a grade of "3" representing minimal competence. A grade of "5" is defined generally to represent optimal performance, with grades of 4, 3, 2, and 1 corresponding to appropriate, acceptable, inadequate, and unacceptable performance, respectively. All scoring criteria are available in the Dental Exam Candidate Guide and CTP Exam Candidate Guide for the current season at:

https://wreb.org/Candidates/Dental/2020_Dental_PDFs/2020_Dental_Candidate_Guide.pdf and https://wreb.org/candidates/dental/dentalpdfs/2021_CTP_Candidate_Guide.pdf .

An example of scoring criteria for grading the Preparation stage of the Posterior Class II composite is displayed in Figure 1, on the following page.

For each criterion, the median of the three examiner grades is weighted to reflect the level of criticality relevant to minimally competent treatment. For example, for the Operative Dentistry section, Outline and Extension accounts for 46% of the Preparation score and Operative Environment accounts for only 15%. Weighted criterion medians are summed to attain procedure scores or CTP case-level scores. The average of the procedure or case-level scores is the raw score for the Operative Dentistry, Prosthodontics, and CTP sections. The sum of weighted criteria is the

raw score for the Endodontics section. Final scores also reflect score deductions if any penalties have been assessed.



DIRECT POSTERIOR CLASS II – COMPOSITE PREPARATION
SCORING CRITERIA RATING SCALE

		5–Optimal	4–Appropriate	3–Acceptable	2–Inadequate	1–Unacceptable
OUTLINE & EXTENSION		Outline is generally smooth and flowing, and does not weaken tooth in any manner.	Outline is slightly irregular, but does not weaken tooth. Isthmus is slightly wider than required for lesion.	Outline moderately weakens marginal ridge or a cusp. Isthmus is too wide or too narrow for lesion.	Outline severely weakens marginal ridge or a cusp. Outline is misshapen and/or forces improper angle of exit. Unsound demineralized enamel that is tactilely different from the adjacent unaffected enamel is present.	Outline is grossly improper and/or lacks any definite form Tactilely unsound demineralized enamel penetrates the DEJ Caries remains in the enamel or is not completely accessed. Unapproved surface prepared.
	Proximal and gingival extensions are visually open and break contact up to 1.0 mm.	Proximal and/or gingival extensions are slightly overextended.	Proximal and/or gingival extensions are moderately overextended.	Proximal and/or gingival extensions are in contact or obviously overextended.	Proximal and/or gingival extensions are grossly overextended
	Optimal treatment of fissures.	Near optimal treatment of fissures.	Adequate treatment of fissures. Neither the tooth nor restoration is compromised.	Inadequate treatment of fissures will compromise the tooth or restoration.	Lack of treatment of fissures will seriously compromise the tooth and restoration.
	Proximal cavosurface angles are equal to or slightly greater than 90°. The integrity of both tooth and restoration is maintained.	Cavosurface angles are not optimal, but do not compromise the integrity of the tooth or restoration. Cavosurface has small areas of minor roughness.	Cavosurface angles possibly compromise the integrity of the tooth or restoration. Cavosurface is moderately rough, but will not adversely affect the final restoration.	Improper cavosurface angles or rough cavosurface will cause the final restoration to fail	Cavosurface angles are grossly improper. Cavosurface has multiple major areas of roughness and/or enamel weakness that will cause the restoration to fail.
INTERNAL FORM		Pulpal floor depth as determined by the lesion or defect does not exceed 2.0 mm from the cavosurface. Enamel may remain on the pulpal floor. Axial wall depth at the gingival floor is 1.0 mm-1.5 mm	Pulpal floor and/or axial wall is slightly shallow or deep	Pulpal floor and/or axial wall is moderately shallow or deep.	Pulpal floor and/or axial wall is critically shallow or critically deep. Affected dentin remains. Indirect pulp cap declared when no caries or affected dentin remains.	Walls and/or floors are grossly deep with total lack of concern for the pulp. Caries remains in the dentin or is not completely accessed. Unapproved surface prepared.
	Conventional design: Internal form is smooth and flowing and has no sharp angles that could weaken or cause voids in the final restoration. Slot design: Proximal box is present. Proximal line angles are ideal	Conventional design: Internal form is mostly smooth and flowing, but some minor roughness and/or sharp angles are present. Slot design: Proximal box is present. Proximal line angles are slightly more or less rounded than ideal.	Conventional design: Internal form is generally smooth and flowing, but some moderate roughness and/or sharp angles are present. Slot design: Proximal box form has moderate variation from ideal	Conventional design: Internal form is rough and unfinished with major areas of roughness or sharp angles that will lead to restoration failure. Slot design: There is excessive rounding of all line angles. Excessive deviation from ideal proximal box form.	Conventional design: Internal form is grossly rough and/or has gross sharp angles that will lead to restoration failure. Slot design: There is gross lack of internal form
OPERATIVE ENVIRONMENT		Rubber dam isolation is stable and optimal; the dam is inverted and has no rips, tears, bunching or exposed tissue. The preparation is clean and dry.	Rubber dam isolation is not optimal, but the preparation is clean and dry.	Rubber dam isolation is adequate, but the wrong teeth are isolated. The preparation can be cleaned and dried	Rubber dam isolation is inadequate. The preparation is difficult to access or visualize due to blood or saliva on the preparation or partial coverage by the dam.	The rubber dam is grossly sloppy and torn, or portions of the preparation are not visible due to blood, saliva, or improper isolation
	No damage to the adjacent tooth.	Minor damage to the adjacent tooth can be removed by polishing without changing the shape of the contact.	Damage to the adjacent tooth can be removed by polishing, but the shape of the contact will be changed	Damage to the adjacent tooth will be difficult to polish out and will maintain appropriate proximal contour. The adjacent tooth will likely require restoration.	Damage to the adjacent tooth will definitely require restoration

Figure 1. Scoring criteria definitions for the Preparation stage of the Direct Posterior Class II Composite procedure, 2020.

Examiners are trained to assign a particular grade only when *all* aspects of performance described for that level have been demonstrated. For example, if performance on the criterion under review meets most of the definition for a grade of "3" but does not quite meet the standard for even one aspect of the definition for a "3," the grade assigned will be a "2," at most. This holds for all graded criteria.

Where applicable, raw scores are scaled and/or equated to facilitate interpretability and to ensure comparability of scores on different test forms and across years. For example, the patient

cases that comprise the Comprehensive Treatment Planning examination are equated to ensure comparability of test forms. Equating of test forms must be conducted because the raw passing score on a difficult form of a test may be lower than the raw passing score on a less challenging form of the test. Scaling and equating procedures allow for unambiguous interpretation of comparable performance on each form. Scaling is a linear or proportional conversion to another, more interpretable, numeric score scale, analogous to converting from degrees Celsius to degrees Fahrenheit. Pass or fail decisions based on final scores, after applicable weighting, equating, and scaling, reflect accurately the passing standards set by examination committees and ensure that candidates of comparable proficiency will be equally likely to pass the examination, regardless of test form or date of administration.

Conclusion

The scores on the two restorations for the WREB Operative Dentistry section have been averaged for many years, and at least one other dental testing agency, CRDTS, also averages the scores attained on different procedures within an examination section, including their dental restorative section.[4] Misinformation has been provided to some State Boards that characterizes this aspect of scoring as somehow improper or not rigorous, which is not accurate. As noted above, averaging the scores on the two Operative restorations is the recommended approach for scoring multiple tasks or test items that are related *within* one assessment. Averaging the scores for the two procedures requires the candidate who underperforms on the first procedure to demonstrate performance that *exceeds* the cut-point by at least as much on the second procedure in order to achieve a passing score and instill confidence in an inference of competence. Candidates who incur a critical error on the first procedure, or are dismissed for egregious performance or ethical violations, fail the Operative Dentistry section at once and are not allowed to perform a second procedure. Every criterion grade assigned (out of six criteria per restoration) reflects the *least* competent aspect of the performance demonstrated, regardless of higher competence demonstrated within the same criterion under evaluation. The decision-making approach used to determine the overall outcome of the multi-section WREB dental examination is completely conjunctive, *i.e.*, candidates must demonstrate competence at the passing standard on *every* section to be successful, overall.

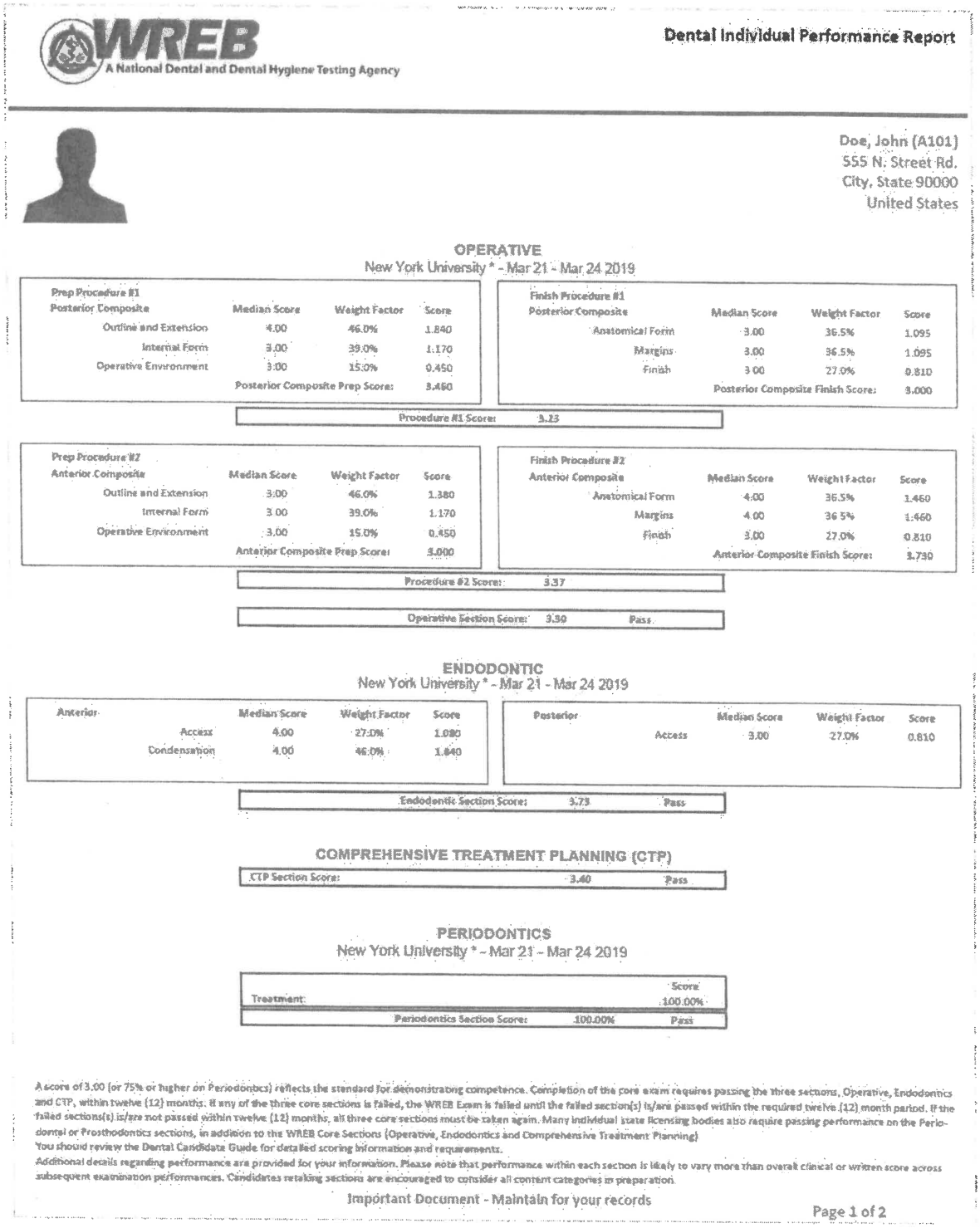
WREB continues to accumulate evidence that supports the validity and integrity of its scoring system but recognizes that some states may be more familiar with an alternative scoring model. Reinterpreting the structure of a test to alter the pass or fail outcome requires a comprehensive standard setting process and justification to maintain defensibility[5, 6] and is not recommended by WREB. However, if a state chooses to require independent passage of each restoration in the Operative Dentistry section (i.e., a conjunctive decision *within* the test), the score attained on each procedure can be easily verified on the WREB dental score report. The score report allows State Boards of Dentistry to see details of the candidate's performance, such as the scores for each restoration and the raw median grades for each Operative Dentistry section criterion. The report provides clarity regarding WREB's scoring system, revealing each median score, criterion weight, and details for any penalties assessed. An example score report is displayed in the Appendix (p. 7 – 8).

References

1. American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. *Standards for Educational and Psychological Testing.* Washington, DC: American Educational Research Association; 2014.
2. Hambleton RK, Slater SC. Reliability of credentialing examinations and the impact of scoring models and standard-setting policies. *Applied Measurement in Education* 1997; *10*(1), 19-38.
3. Haladyna TM, Hess RK. An evaluation of conjunctive and compensatory standard-setting strategies for test decisions. *Educational Assessment* 1999; *6*(2), 129-153.
4. Central Regional Dental Testing Service, Inc. *Dental Examination Candidate Manual, Class of 2020.* Topeka, KS: CRDTS. At: https://www.crdts.org/uploads/2020%20DENTAL%20CANDIDATE%20MANUAL.pdf . Accessed 20 Jan. 2020.
5. Cizek GJ, Bunch MB. *Standard Setting: A Guide to Establishing and Evaluating Performance Standards on Tests.* Thousand Oaks, CA: Sage, 2007.
6. Mattar J, Hambleton RK, Copella JM, Finger, MS. Reviewing or revalidating performance standards on credentialing examinations. In G. J. Cizek (Ed.), *Setting Performance Standards: Concepts, Methods, and Innovations* (pp. 399-412). New York: Routledge, 2012.

Appendix

Example WREB Dental Examination Individual Performance Report



WREB
A National Dental and Dental Hygiene Testing Agency

Dental Individual Performance Report

Doe, John (A101)
555 N. Street Rd.
City, State 90000
United States

OPERATIVE
New York University * - Mar 21 - Mar 24 2019

Prep Procedure #1 Posterior Composite	Median Score	Weight Factor	Score
Outline and Extension	4.00	46.0%	1.840
Internal Form	3.00	39.0%	1.170
Operative Environment	3.00	15.0%	0.450
Posterior Composite Prep Score:			3.460

Finish Procedure #1 Posterior Composite	Median Score	Weight Factor	Score
Anatomical Form	3.00	36.5%	1.095
Margins	3.00	36.5%	1.095
Finish	3.00	27.0%	0.810
Posterior Composite Finish Score:			3.000

Procedure #1 Score: 3.23

Prep Procedure #2 Anterior Composite	Median Score	Weight Factor	Score
Outline and Extension	3.00	46.0%	1.380
Internal Form	3.00	39.0%	1.170
Operative Environment	3.00	15.0%	0.450
Anterior Composite Prep Score:			3.000

Finish Procedure #2 Anterior Composite	Median Score	Weight Factor	Score
Anatomical Form	4.00	36.5%	1.460
Margins	4.00	36.5%	1.460
Finish	3.00	27.0%	0.810
Anterior Composite Finish Score:			3.730

Procedure #2 Score: 3.37

Operative Section Score: 3.30 Pass

ENDODONTIC
New York University * - Mar 21 - Mar 24 2019

Anterior	Median Score	Weight Factor	Score
Access	4.00	27.0%	1.080
Condensation	4.00	46.0%	1.840

Posterior	Median Score	Weight Factor	Score
Access	3.00	27.0%	0.810

Endodontic Section Score: 3.73 Pass

COMPREHENSIVE TREATMENT PLANNING (CTP)

CTP Section Score: 3.40 Pass

PERIODONTICS
New York University * - Mar 21 - Mar 24 2019

Treatment:	Score
	100.00%

Periodontics Section Score: 100.00% Pass

A score of 3.00 (or 75% or higher on Periodontics) reflects the standard for demonstrating competence. Completion of the core exam requires passing the three sections, Operative, Endodontics and CTP, within twelve (12) months. If any of the three core sections is failed, the WREB Exam is failed until the failed section(s) is/are passed within the required twelve (12) month period. If the failed sections(s) is/are not passed within twelve (12) months, all three core sections must be taken again. Many individual state licensing bodies also require passing performance on the Periodontal or Prosthodontics sections, in addition to the WREB Core Sections (Operative, Endodontics and Comprehensive Treatment Planning)
You should review the Dental Candidate Guide for detailed scoring information and requirements.
Additional details regarding performance are provided for your information. Please note that performance within each section is likely to vary more than overall clinical or written score across subsequent examination performances. Candidates retaking sections are encouraged to consider all content categories in preparation.

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WREB
A National Dental and Dental Hygiene Testing Agency

Dental Individual Performance Report

Doe, John (A101)
555 N. Street Rd.
City, State 90000
United States

PROSTHODONTIC
New York University * - Mar 21 - Mar 24 2019

Anterior Crown	Median Score	Weight Factor	Score
Occlusal Reduction	3.00	30.0%	0.900
Axial Reduction	4.00	25.0%	1.000
Margins & Finish Line	4.00	35.0%	1.400
Operative Environment	4.00	10.0%	0.400
	Anterior Crown Prep Score:		3.700

Anterior Bridge Abutment	Median Score	Weight Factor	Score
Occlusal Reduction	4.00	30.0%	1.200
Axial Reduction	4.00	25.0%	1.000
Margins & Finish Line	3.00	35.0%	1.050
Operative Environment	4.00	10.0%	0.400
	Anterior Bridge Abutment Prep Score:		3.650

Posterior Bridge Abutment	Median Score	Weight Factor	Score
Occlusal Reduction	4.00	30.0%	1.200
Axial Reduction	4.00	25.0%	1.000
Margins & Finish Line	3.00	35.0%	1.050
Operative Environment	4.00	10.0%	0.400
	Posterior Bridge Abutment Prep Score:		3.650

Prosthodontic Section Score:	3.67	Pass

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