VIRGINIA BOARD OF DENTISTRY

Examination Committee
and
Clinical Exam Advisory Panel

February 1, 2013 Agenda

Department of Health Professions
Perimeter Center
Second Floor Conference Center
9960 Mayland Drive
Henrico, Virginia 23233

TIME

9:30 a.m. **Call to Order — Martha C. Cutright, D.D.S., Chair**

Evacuation Announcement – Ms. Reen

Approval of September 9, 2011 Minutes **P1-P4**

Review of Materials from California

- **Code Provision for Portfolio Exam** **P5-P8**
- **Comira Report on Portfolio Examination** **P9-P62**
- **List of Competencies** **P63-P79**
- **Draft Portfolio Regulations** **P80-P117**

Adopt a Work Plan and Make Assignments

Adjourn

UNAPPROVED DRAFT

BOARD OF DENTISTRY
MINUTES OF EXAMINATION COMMITTEE
SEPTEMBER 9, 2011

TIME AND PLACE:	The Examination Committee convened on September 9, 2011 at 1:40 p.m., at the Department of Health Professions, Perimeter Center, 2nd Floor Conference Center, 9960 Mayland Drive, Henrico, VA 23233.
PRESIDING:	Martha C. Cutright, D.D.S.
MEMBERS PRESENT:	Jeffrey Levin, D.D.S. Augustus A. Petticolas, Jr., D.D.S.
MEMBERS ABSENT:	None
OTHER BOARD MEMBERS PRESENT:	Meera A. Gokli, D.D.S. Robert H. Hall, Jr., D.D.S. Jacqueline G. Pace, R.D.H.
STAFF PRESENT:	Sandra K. Reen, Executive Director, Board of Dentistry Donna Lee, Discipline Case Manager
ESTABLISHMENT OF QUORUM:	With all members of the Committee present, a quorum was established.
PUBLIC COMMENT:	No public comments were received.
APPROVAL OF MINUTES:	Dr. Cutright asked if the Committee members had reviewed the August 18, 2011 and August 19, 2011 minutes. No changes or corrections were made. Dr. Petticolas moved to accept the August 18, 2011 and August 19, 2011 minutes. The motion was seconded and passed.
REVIEW OF ADVISORY FORUM DISCUSSIONS:	Dr. Cutright stated that the conclusion of the Advisory Forum discussion meeting on August 19, 2011, was to pursue moving away from live patient clinical examinations. It was also agreed that representatives from Canada and California should be invited to address the Board about their programs. Dr. Petticolas said that based on Dr. Dishman's statements at the advisory forum regarding dental schools having the most knowledge about students' dental skills, one option to evaluate is relying on graduation from dental school to vouch for the skills of students and

avoid external testing for students that will work in Virginia.

Dr. Levin mentioned that up until 1969, dental examiners interviewed students and decided whether or not to grant licenses, but that system was found to be unfair.

Ms. Reen stated that the granting of a license without an examination might be based on the completion of a program that meets the Council of Dental Accreditation (CODA) requirements. She also mentioned that there are different types of accreditations such as fully accredited or provisionally accredited schools. This would provide common benchmarks regardless of where a person attended school. The Committee agreed to Ms. Reen's suggestion to get more information about CODA accreditations.

Ms. Pace suggested that the Board use some portions of the Portfolio system, OSCE, and other programs to create a hybrid system for Virginia.

Dr. Levin stated that we should always have the option of taking a regional examination.

Dr. Hall suggested that the Board remain with SRTA and push for manikin based exams.

PLAN NEXT STEPS FOR EXPLORING EXAM ALTERNATIVES:

Ms. Reen suggested focusing on how to gather the information needed to compare the different models to present to the Board and recommended developing questions to be answered about the various models.

Dr. Levin suggested that each Committee member compile 10 to 15 questions they may have about each program so that Ms. Reen can review and present to the program representatives.

It was agreed to recommend to the Board at its December meeting to work with SRTA on using manikin based examinations as opposed to live patients.

Ms. Reen stated that there are four types of plans:

- Curriculum Integrated Format
- OSCE
- Portfolio – Traditional and Hybrid Models
- New York's Fifth Year Model

The consensus was to take the following steps:

- Committee members will e-mail to Ms. Reen proposed questions to be asked of program representatives;
- Dr. Cutright and Ms. Reen will review questions by October 1, 2011 for final submission;
- Knowledgeable individuals in Richmond will be invited to present the OSCE and Portfolio programs to the Board at its December meeting;
- Invitations will be made for presentations on the Curriculum Integrated Format and New York's Fifth Year programs at the March Board Meeting;
- Participants in the Advisory Forum will be invited to attend the December and March Board meetings for the program presentations.

COUNCIL OF INTERSTATE TESTING AGENCIES EXAM:

Dr. Cutright stated that the Board President referred this matter to the Exam Committee to make a recommendation to the Board as to whether or not it should continue to accept the CITA exam. The matter was brought to the Board's attention because at the recent SRTA meeting it was determined that CITA states such as North Carolina do not accept any other exams.

Dr. Levin suggested recommending that the Board send a letter to CITA advising them the Board will no longer accept their exam. Dr. Hall recommended that the exam should still be accepted since it is a good exam. Discussion followed about the interests of dental students and the benefits of accepting all exams. The consensus reached was to recommend to the Board that it continue to accept CITA and also recommend that a letter be sent to the North Carolina Board of Dentistry encouraging acceptance of other exams in addition to its exam.

AMERICAN BOARD OF DENTAL EXAMINERS:

Dr. Cutright stated that the Board President referred this matter to the Exam Committee to make a recommendation to the Board as to whether or not it should join ADEX.

Dr. Cutright suggested that a Board member or Dr. James Watkins should represent the Board at the ADEX meeting in November. Ms. Reen suggested that more information was needed about ADEX and offered to contact ADEX about their membership policies and costs. Ms. Reen said once she receives the information, she will confer with Dr. Hall as Board President regarding attendance. It was agreed that ADEX membership and costs will be added to the December Board meeting agenda. Dr. Hall stated that he would like Dr. Watkins to attend the ADEX meeting once all the information is received.

PLAN NEXT STEPS FOR LAW EXAM DEVELOPMENT:

Dr. Cutright mentioned that the Committee met on August 18, 2011 to revise some questions and answers to the Dental Law Exam. She explained that the Committee will need to update questions and answers to address changes in the statutes and regulations and to decide how to address the new regulations. Ms. Reen stated that the current exam does not have any questions pertaining to Dental Assistants II, Radiation Certification, Recovery of Disciplinary Costs, or Mobile Facilities. She said that the contract with PSI will expire at the end of 2012, and the Board will need to issue a new RFP and may be able to choose from multiple vendors for a new contract.

The consensus from the Committee was for Ms. Reen to send a request by e-mail to Committee members to review new regulatory provisions and to identify questions or topics they would like to add to the law exam.

The next Committee meeting will be scheduled after the December 2, 2011 Board meeting.

ADJOURNMENT:

With all business concluded, the Committee adjourned at 3:20 p.m.

Martha C. Cutright, D.D.S, Chair

Sandra K. Reen, Executive Director

Date

Date

Assembly Bill No. 1524

CHAPTER 446

An act to amend Sections 1630 and 1632 of, to add Sections 1632.1 and 1632.6 to, and to repeal Section 1631 of, the Business and Professions Code, relating to dentistry.

[Approved by Governor September 29, 2010. Filed with Secretary of State September 29, 2010.]

LEGISLATIVE COUNSEL'S DIGEST

AB 1524, Hayashi. Dentistry: examination requirements.

The Dental Practice Act provides for the licensure and regulation of dentists and associated professions by the Dental Board of California within the Department of Consumer Affairs. Existing law requires an applicant for a license to practice dentistry to complete various examinations, including the National Board Dental Examination, an examination in California law and ethics developed by the board, and a clinical and written examination administered either by the board or the Western Regional Examining Board. Existing law prescribes the maximum amount of fees to be charged for examination, licensure, and renewal, for deposit into the State Dentistry Fund.

This bill would abolish the clinical and written examination administered by the board. The bill would instead replace that examination with a portfolio examination of an applicant's competence to enter the practice of dentistry, which would be conducted while the applicant is enrolled in a dental school program at a board-approved dental school. The bill would require this examination to utilize uniform standards of clinical experiences and competencies, as approved by the board. At the end of that dental school program, the bill would then require the passage of a final assessment of the applicant's portfolio, subject to certification by his or her dean and payment of a $350 fee. Under the bill, the portfolio examination would not be conducted until the board adopts regulations to implement the portfolio examination. The bill would require the board to provide specified notice on its Internet Web site and to the Legislature and the Legislative Counsel when these regulations have been adopted by the board. The bill would require the board to oversee the portfolio examination and final assessment process, and would require the board to biennially review each dental school with regard to the standardization of the portfolio examination. The bill would also set forth specified examination standards.

The bill would also, as part of the ongoing implementation of the portfolio examination, require the board, by December 1, 2016, to review the examination to ensure compliance with certain requirements applicable to all board examinations under the department's jurisdiction. The bill would

provide that the examination shall cease to be an option for applicants if the board determines the examination fails to meet those requirements. The bill would require the board to submit its review and certification or determination to the Legislature and the department, by December 1, 2016.

The people of the State of California do enact as follows:

SECTION 1. Section 1630 of the Business and Professions Code is amended to read:

1630. The examination of applicants for a license to practice dentistry in this state, as described in Section 1632, shall be sufficiently thorough to test the fitness of the applicant to practice dentistry, and both questions and answers shall be written in the English language.

SEC. 2. Section 1631 of the Business and Professions Code is repealed.

SEC. 3. Section 1632 of the Business and Professions Code is amended to read:

1632. (a) The board shall require each applicant to successfully complete the Part I and Part II written examinations of the National Board Dental Examination of the Joint Commission on National Dental Examinations.

(b) The board shall require each applicant to successfully complete an examination in California law and ethics developed and administered by the board. The board shall provide a separate application for this examination. Applicants shall submit this application and required fee to the board in order to take this examination. In addition to the aforementioned application, the only other requirement for taking this examination shall be certification from the dean of the qualifying dental school attended by the applicant that the applicant has graduated, or will graduate, or is expected to graduate. Applicants who submit completed applications and certification from the dean at least 15 days prior to a scheduled examination shall be scheduled to take the examination. Successful results of the examination shall, as established by board regulation, remain valid for two years from the date that the applicant is notified of having passed the examination.

(c) Except as otherwise provided in Section 1632.5, the board shall require each applicant to have taken and received a passing score on one of the following:

(1) A portfolio examination of the applicant's competence to enter the practice of dentistry. This examination shall be conducted while the applicant is enrolled in a dental school program at a board-approved school located in California. This examination shall utilize uniform standards of clinical experiences and competencies, as approved by the board pursuant to Section 1632.1. The applicant shall pass a final assessment of the submitted portfolio at the end of his or her dental school program. Before any portfolio assessment may be submitted to the board, the applicant shall remit to the board a three hundred fifty dollar ($350) fee, to be deposited into the State Dentistry Fund, and a letter of good standing signed by the dean of his or

her dental school or his or her delegate stating that the applicant has graduated or will graduate with no pending ethical issues.

(A) The portfolio examination shall not be conducted until the board adopts regulations to carry out this paragraph. The board shall post notice on its Internet Web site when these regulations have been adopted.

(B) The board shall also provide written notice to the Legislature and the Legislative Counsel when these regulations have been adopted.

(2) A clinical and written examination administered by the Western Regional Examining Board, which board shall determine the passing score for that examination.

(d) Notwithstanding subdivision (b) of Section 1628, the board is authorized to do either of the following:

(1) Approve an application for examination from, and to examine an applicant who is enrolled in, but has not yet graduated from, a reputable dental school approved by the board.

(2) Accept the results of an examination described in paragraph (2) of subdivision (c) submitted by an applicant who was enrolled in, but had not graduated from, a reputable dental school approved by the board at the time the examination was administered.

In either case, the board shall require the dean of that school or his or her delegate to furnish satisfactory proof that the applicant will graduate within one year of the date the examination was administered or as provided in paragraph (1) of subdivision (c).

SEC. 4. Section 1632.1 is added to the Business and Professions Code, to read:

1632.1. (a) With regard to the portfolio examination specified in paragraph (1) of subdivision (c) of Section 1632, the board shall independently monitor and audit the standardization and calibration of dental school competency instructors at least biennially to ensure standardization and an acceptable level of calibration in the grading of the examination. Each dental school's competency examinations shall be audited biennially by the board.

(b) The board shall oversee all aspects of the portfolio examination process specified in paragraph (1) of subdivision (c) of Section 1632 and under this section, but shall not interfere with the dental school authority to establish and deliver an accredited curriculum. The board shall determine an end-of-year deadline, in consultation with the current board-approved dental schools, to determine when the portfolio examinations shall be completed and submitted to the board for review by the board's examiners.

(c) The board, in consultation with the current board-approved dental schools, shall approve portfolio examination competencies and the minimum number of clinical experiences required for successful completion of the portfolio examination.

(d) The board shall require and verify successful completion of competency examinations that were performed on a patient of record of a board-approved dental school, including, but not limited to, the following:

(1) Comprehensive oral diagnosis and treatment planning.

(2) Periodontics.
(3) Direct restorations.
(4) Indirect restorations.
(5) Removable prosthodontics.
(6) Endodontics.

SEC. 5. Section 1632.6 is added to the Business and Professions Code, to read:

1632.6. (a) As part of the ongoing implementation of paragraph (1) of subdivision (c) of Section 1632, the board shall review the portfolio examination to ensure compliance with the requirements of Section 139 and to certify that the portfolio examination process meets those requirements. If the board determines that the portfolio examination fails to meet those requirements, paragraph (1) of subdivision (c) of Section 1632 shall cease to be implemented and the portfolio examination will no longer be an option for applicants. The board's review and certification or determination shall be completed and submitted to the Legislature and the department by December 1, 2016.

(b) A report to the Legislature pursuant to this section shall be submitted in compliance with Section 9795 of the Government Code.

(c) This section shall become inoperative on December 1, 2020, pursuant to Section 10231.5 of the Government Code.

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PORTFOLIO EXAMINATION TO QUALIFY FOR CALIFORNIA DENTAL LICENSURE

SUBMITTED TO

Dental Board of California
2005 Evergreen Street, Suite 1550
Sacramento, CA 95815

comira

PREPARED BY
Comira
Psychometric Services Division
110 Blue Ravine Road, Suite 160
Folsom, California 95630
December 1, 2009

EXECUTIVE SUMMARY

This report describes the procedures used by psychometric consultants at Comira to define the competencies to be tested in the portfolio examination and provide background research that may affect the implementation process. Because the portfolio is an examination, it must meet the Standards for Educational and Psychological Testing (1999) to ensure that it is fair, unbiased, and legally defensible. The purpose of applying the Standards to the validation process is to ensure that the portfolio examination can provide evidence that entry-level dentists possess the minimum competencies necessary to protect public health and safety.

The most important step in establishing the validity of the portfolio examination is to define the competencies to be tested in the examination. Separate focus groups of key faculty from five Board-approved dental schools were convened to identify for oral diagnosis and treatment planning, direct and indirect restoration, removable prosthodontics, endodontics, and periodontics. Basically, focus group participants identified the competencies to be assessed in a systematic way beginning with an outline of major competency domains and ending with a detailed account of major and specific competencies organized in outline fashion. All participants provided input in a systematic, iterative fashion, until consensus is achieved. The competencies identified from this process will serve as the framework for the evaluation system, training and calibration procedures for examiners, and audit procedures for evaluating the efficacy of the process.

- Section 5 lists the major competencies and the subcomponents within each competency (to include in statute)
- Section 6 describes the specific content to be covered within each subcomponent (to be included in regulation upon implementation)
- Section 7 describes basis for the evaluation system and procedures required to design it (to be included in regulation upon implementation)
- Section 8 describes the procedures that will be used to train and calibrate examiners (to be included in regulation upon implementation)
- Section 9 describes procedures that will be used to establish audit procedures for ensuring that the examination accomplishes its objectives (to be included in regulation upon implementation)

The foundation of the portfolio examination is already in place at the dental schools. All five dental schools---University of Pacific, University of California San Francisco, Loma Linda, University of Southern California, and University of California Los Angeles---had a great deal of consistency in their evaluation system. They used very similar criteria to evaluate students' performance and used similar procedures to calibrate their faculty

according to performance criteria. This finding has important implications for the implementation phase of the portfolio examination because the evaluation systems currently used by the dental schools will not require major changes. The only difference between the current systems and the portfolio examination is that the competencies and the system to evaluate them would be standardized across schools. Therefore, the portfolio examination process can be implemented within the dental schools without additional resources. It is anticipated that the students will find the portfolio examination as a reasonable alternative for initial licensure.

In summary, the dental schools were able to reach consensus in identifying critical competencies to be measured in the portfolio examination, thereby standardizing the competencies to be measured and providing the framework for the evaluation system, training and calibration procedures for examiners, and audit procedures for evaluating the efficacy of the process. Active involvement from the five current dental schools will be required to standardize the evaluation system, calibrate examiners, and establish protocols for auditing the examination. Since the foundation of the evaluation system and calibration processes is already embedded in the curriculum, no additional resources will be required.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

SECTION 1 – INTRODUCTION

OVERVIEW

Comira approached the portfolio examination with the understanding that the outcome would directly impact predoctoral dental education at every dental school in California and could provide the framework for evaluating predoctoral dental competencies in dental schools across the nation.

The overarching principle for development of the portfolio examination pathway was consumer protection. Comira worked closely with dental school faculty to derive the framework and content of the examination; moreover, procedures were conducted in an objective and impartial manner with the public's health, safety, and welfare as the most important concern.

First, Comira met with deans and dental school faculty who represented major domains of practice as well as legislative sponsors from the California Dental Association to present the portfolio examination concept and answer faculty questions regarding impact on their respective programs. Second, we conducted focus groups with representative faculty from each of the Board-approved dental schools to individually present the concept and discuss their concerns. Third, we conducted discipline-specific focus groups, i.e., comprehensive oral diagnosis and treatment planning, direct and indirect restoration, removable prosthodontics, endodontics, and periodontics, to develop the content for the examination.

From these meetings, we gained an understanding of the predoctoral dental competencies that were critical to development of the portfolio examination and creating supporting documentation that would be used in the formulation of Assembly Bill 1524. We also conducted an extensive review of written documentation of each school's competency examinations to gain insights into the procedures used in competency examinations and associated scoring systems.

UTILIZATION OF EXPERTS

Deans, section chairs, department chairs and/or other faculty who were knowledgeable in the content domains of interest, e.g., comprehensive oral diagnosis and treatment planning, direct and indirect restoration, removable prosthodontics, periodontics, endodontics, were consulted throughout the process to provide expertise regarding the competencies acquired in their respective programs and the competencies that should be assessed in the examination. Focus groups were conducted face-to-face or via videoconference link between conference rooms at the University of the Pacific and at the University of Southern California.

PSYCHOMETRIC STANDARDS

The Standards for Educational and Psychological Testing (1999) set forth by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education serve as the standards for evaluating all aspects of credentialing, including professional and occupational credentialing. The Standards are used by the measurement profession as the psychometric standards for validating all examinations, including licensing and certification examinations.

Whenever applicable, specific Standards will be cited as they apply to definition of examination content, rating scales, calibration of raters, and auditing procedures to link the particulars of the portfolio examination to psychometric practice.

SECTION 2 – BACKGROUND

EXISTING PATHWAYS

The Dental Board of California (hereafter, the Board) currently offers three pathways that predoctoral dental students may choose to obtain initial licensure:

- A clinical and written examination developed by the Board,
- A clinical and written examination administered by the Western Regional Examining Board, or,
- A minimum of 12 months of a general practice residency or advanced education in general dentistry program approved by the American Dental Association's Commission on Dental Accreditation.

All applicants are required to successfully complete the written examinations of the National Board Dental Examination of the Joint Commission on National Dental Examinations and an examination in California law and ethics.

PORTFOLIO EXAMINATION PATHWAY

Assembly Bill 1524, introduced in February 2009, would eliminate the clinical and written examination currently offered by the Board. Provisions of the bill would allow the Board to offer the portfolio examination as an alternative to initial licensure for general dentists in addition to other pathways available to students graduating from dental schools in California, i.e., the Western Regional Examining Board (WREB) examination and "Licensure by Credential" (PGY-1).

> *"...The bill would abolish the clinical and written examination administered by the board. The bill would replace the examination with an assessment process in which an applicant is assessed while enrolled at an in-state dental school utilizing uniform standards of minimal clinical experiences and competencies and at the end of his or her dental program."*

REQUIREMENTS FOR PORTFOLIO EXAMINATION

Section 3 of the Business and Professions Code is amended to read:

1632. (a) The board shall require each applicant to successfully complete the written examinations of the National Board Dental Examination of the Joint Commission on National Dental Examinations.

1632. (b) The board shall require each applicant to successfully complete an examination in California law and ethics developed and administered by the board. The board shall provide a separate application for this examination.....the only other requirement for taking this examination shall be certification from the dean of the qualifying dental school attended by the applicant that the applicant has graduated, or will graduate, or is expected to graduate.

1632. (c) The board shall require each applicant to have taken and received a passing score .....on the portfolio assessment (examination) of the applicant's fitness to practice dentistry while the applicant is enrolled in a dental school program at a board-approved school in California. This assessment shall utilize uniform standards minimal clinical experiences and competencies. The applicant shall pass a final assessment at the end of his or her dental school program.

OTHER REQUIREMENTS

Students who participate in the portfolio examination pathway must:

(a) Be in good academic standing in their institution at the time of portfolio examination and be signed off by the dean of their respective schools.

(b) Have no pending ethical issues at the time of the portfolio examination and must be signed off by the dean of their respective schools.

SECTION 3 –THE PORTFOLIO EXAMINATION MODEL

DEFINITION

Albino, Young, Neumann, Kramer, Andrieu, Henson, Horn, and Hendricson (2008, p. 164) define clinical competency examinations as performance examinations in which students perform designated tasks and procedures on a patient without instructor assistance. The process of care and the products are assessed by faculty observers typically guided by rating scales.

Here, the portfolio examination can be conceptualized as a series of examinations administered in a series of patient encounters in several competency domains. Students are rated according to standardized rating scales by faculty examiners who are formally trained in their use.

CHARACTERISTICS

The distinguishing characteristics of the portfolio examination fulfill psychometric requirements for classifying the portfolio as an examination.

First, the portfolio examination is considered a performance examination that assesses students' skills in commonly encountered clinical situations. There are multiple clinical situations that allow for an evaluation of the full continuum of competency.

Second, it includes components of clinical examination administered by a regulatory board or regional examining entity.

Third, students' performance is measured according to the information provided in competency evaluations conducted in the schools by clinical faculty within the predoctoral program of education.

Fourth, it produces documented data for outcomes assessment of results, thereby allowing for verification of the validity evidence.

Thus, a portfolio examination involves hands-on performance evaluations of clinical skills as evaluated within the students' program of dental education.

The portfolio examination model is designed to use the structure for student evaluation that currently exists within the schools to assess minimum competence. The faculty would observe the treatment provided and evaluate students according to consistent criteria developed by a consensus of key faculty

from all of the dental schools. Each student would prepare a portfolio of documentation that provides proof of completion of competency evaluations for specific procedures such as amalgam/composite restoration, endodontics, fixed prosthetics, oral diagnosis and treatment planning, periodontics, radiography, and removable prosthodontics.

A portfolio examination model captures the strength of traditional portfolios used to assess learning progress and have the additional advantage of being integrated within the current educational process and within the context of a treatment plan of a patient of record. Instead of developing a traditional portfolio and having it evaluated, the portfolio examination model requires documentation of the test cases (or competency cases) which are competency evaluations assembled in either paper or electronic format. The faculty examiners would attest to the ratings achieved by the students. A portfolio examination would be built and evaluated in real time during students' clinical training. Documentation for the portfolio examination would be submitted in paper or electronic format for the required procedures, e.g., periodontics, endodontics, prosthodontics, restorative).

UNIQUE FEATURES

The portfolio examination has several unique features:

1. ***Oversight maintained by the Board.***

   The Board has the lawful responsibility to ensure that dentists who are licensed possess the competencies to practice safely and that responsibility cannot be delegated.

2. ***Built-in system for auditing the process.***

   Upon implementation, a system must be in place to audit the alternative pathway examination. The auditing system must be part of the design requirement of the alternative pathway examination. The auditing system must be designed such that the Board and the examiners have defined responsibilities to ensure that the students who are successful are competent.

3. ***Does not require additional resources from the students, schools, or the Board.***

   There are systems and procedures already in place in the dental schools. The structure of the systems and procedures are quite suitable for evaluating students' competence. The systems and procedures are very similar among the dental schools and, with collaboration among the schools, could create a common system.

4. ***Must be instituted within the current systems of student evaluation.***

   The standards and criteria for successful performance must be fully established by the schools and consistent application of the standards and criteria would take into account the tremendous amount of work undertaken to comprehensively evaluate the students' clinical skills in a variety of clinical situations.

5. ***Must be considered an examination and meet all professional testing standards.***

   Any method or system that evaluates performance and classifies students within a licensing context is considered an examination by professional testing standards and case law.

6. ***Meets psychometric standards, relevant to current practice, and designed for minimum competence.***

   Because the portfolio pathway is an examination, it must meet legal standards as explicated in Sections 12944, Section 139, guidelines of the Business and Professions Code and psychometric standards for examinations set forth by the Standards for Educational and Psychological Testing (1999).

7. ***Is designed to cover the full continuum of competence.***

   The alternative pathway examination must assess competencies throughout the course of treatment including oral diagnosis and treatment planning, follow-up and ongoing care, restorative (amalgam and composite restoration, fixed prosthetics), endodontics, periodontics, radiography, and removable prosthodontics.

8. ***Evaluation of competence is within the course of treatment plan for patients of record.***

   The competency of the students must be evaluated in the course of treatment of a patient. The evaluation of competence should not be in an artificial or contrived situation as may be true when the services are solely for the purpose of training.

9. ***Examiners are regularly calibrated for consistent implementation of the examination.***

   The examiners who participate in the alternative pathway examination must be trained and calibrated to ensure that the standards and criteria do not vary

across students. Each student must have a standardized examination experience.

10. ***Has policies and procedures that treat licensure students fairly and professionally, with timely and complete communication of examination logistics and results.***

The alternative pathway examination must be designed such that students are knowledgeable of standards to which they are being held accountable and the procedures that they should follow in order to maximize success.

SECTION 4 – CONTENT VALIDATION

APPLICABLE STANDARDS

Since criterion-related evidence is generally not available for use in making licensure decisions, validation of licensure and certification tests rely mainly on expert judgments that the test adequately represents the content domain of the occupation or specialty. Here, content-related validity evidence from a job analysis supports the validity of the portfolio examination as a measure of clinical competence. The Standards contain extensive discussion of validity issues.

> *"Test design generally starts with an adequate definition of the occupation or specialty, so that persons can be clearly identified as engaging in the activity." (p. 156)*

> *"Often a thorough analysis is conducted of the work performed by people in the profession or occupation to document the tasks and abilities that are essential to practice. A wide variety of empirical approaches is used, including delineation, critical incidence techniques, job analysis, training needs assessments, or practice studies and surveys of practicing professionals. Panels of respected experts in the field often work in collaboration with qualified specialists in testing to define test specifications, including the knowledge and skills needed for safe, effective performance, and an appropriate way of assessing that performance." (p. 156)*

> *"Credentialing tests may cover a number of related but distinct areas. Designing the testing program includes deciding what areas are to be covered, whether one or a series of tests is to be used, and how multiple test scores are to be combined to reach an overall decision." (p. 156-157)*

There are also specific standards that address the use of job analysis to define the competencies to be tested in the portfolio examination.

Standard 14.8 "Evidence of validity based on test content requires a thorough and explicit definition of the content domain of interest. For selection, classification, and promotion, the characterization of the domain should be based on a job analysis." (p. 160)

Standard 14.14

"The content domain to be covered by a credentialing test should be defined clearly and justified in terms of the importance of the content for credential-worthy performance in an occupation or profession. A rationale should be provided to support the claim that the knowledge or skills being assessed are required for credential-worthy performance in an occupation and are consistent with the purpose for which the licensing or certification program was instituted" (p. 161)

METHODOLOGY

The methodology used to validate the content of the competency examinations comprising the portfolio examination is a commonly used psychometric procedure called job (aka practice) analysis. Job analysis data is typically obtained through multiple sources including interviews, observations, survey questionnaires, and/or focus groups.

For the portfolio examination, we relied on information obtained from focus groups comprised of participants representing different content domains of practice. This methodology has been used extensively in the measurement field and is described in detail in many publications in the psychometric literature as a "table-top job analysis", e.g., Department of Energy (1994). Basically, focus group participants identify the competencies to be assessed in a systematic way beginning with an outline of major competency domains and ending with a detailed account of major and specific competencies organized in outline fashion. All participants provide input in a systematic, iterative fashion, until consensus is achieved.

PROCESS

Separate focus groups from the five Board-approved dental schools were convened to define the content for the portfolio examinations for six competency domains to be assessed in the portfolio examination: comprehensive oral diagnosis and treatment planning, direct and indirect restoration, removable prosthodontics, periodontics, and endodontics.

The content was developed at two levels of analysis. The first level of analysis was to develop a consensus at a broad level regarding the major competencies to be assessed. The faculty indicated that the competencies were acceptable to the schools as the basis for the portfolio examination. They further understood that the major competencies were likely to be included in proposed legislation in order to implement the portfolio examination. The second level of analysis produced detailed procedures for measuring specific subcomponents within each of the six competency domains. The detailed procedures will be used to develop the portfolio examinations.

PROCEDURE

The procedure was conducted systematically in several steps:

Step 1 *Orient focus group*	• Present participants with an outline of topics to be covered for a given competency domain • Orient participants as to the goal of the process and how the results will be used
Step 2 *Review subject matter*	• Have participants explain how their program currently conducts competency examinations • Review the topics involved in a given competency domain, e.g., periodontics, endodontics, etc.
Step 3 *Identify major competencies*	• Identify major competencies to be assessed • Discuss implications of the competencies at each participant's program until consensus is reached
Step 4 *Identify specific competencies*	• Identify specific competencies within each content domain to be assessed • Discuss implications of the competencies at each participant's program until consensus is reached
Step 5 *Sequence competencies*	• Sequence the competencies until consensus is reached
Step 6 *Develop competency statements*	• Rephrase each competency in terms of a consistent format that includes an action verb and direct object (c. f., Chambers & Gerrow, 1994)
Step 7 *Refine competencies*	• Make final edits to the wording of the competencies until consensus is reached
Step 8 *Re-evaluate competencies*	• Discuss the list of major and specific competencies until consensus is reached

SECTION 5 – JOB-RELATED CONTENT OF PORTFOLIO

The portfolio examination is comprised of performance examinations in six competency domains identified by the focus groups using a "table-top job analysis" methodology described in Section 4. The competencies and their subcomponent competencies provide the most fundamental type of validity evidence for the portfolio examination, that is, *content*. The subcomponents of each major competency domain are presented below.

Table 1 – Major competencies and subcomponents

Comprehensive oral diagnosis and treatment planning	I. Collect medical and dental history II. Perform comprehensive examination III. Evaluate data to identify problems IV. Work up problems and develop tentative treatment plan V. Develop final treatment plan VI. Prepare documentation according to risk management standards
Direct restoration	I. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class II amalgam or composite II. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class III or IV composite III. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class V glass ionomer, composite or amalgam IV. Select case based on minimum criteria for direct restorations
Indirect restoration	I. Restore tooth to optimal form, function and esthetics with crown or onlay according to approved procedures and materials for indirect restorations II. Select case based on minimum criteria for indirect restorations
Removable prosthodontics	I. Develop diagnosis and determine treatment options and prognosis for removable prosthesis II. Restore edentulous spaces with removable prostheses III. Manage tooth loss transition with immediate or transitional prostheses IV. Manage prosthetic problems V. Direct and evaluate laboratory services for prosthesis
Endodontics	I. Apply case selection criteria for endodontic cases II. Demonstrate pretreatment preparation for endodontic treatment III. Perform access opening IV. Perform shaping and cleaning techniques V. Perform obturation techniques VI. Demonstrate completion of endodontic case VII. Provide recommendations for post-endodontic treatment
Periodontics	I. Perform comprehensive periodontal examination II. Determine diagnosis and develop periodontal treatment plan III. Perform nonsurgical periodontal therapy IV. Perform periodontal re-evaluation

SECTION 6 – ANNOTATED OUTLINE OF COMPETENCIES

For each major competency and subcomponent competency domain, focus group participants were asked to provide additional details to specify the scope of the competencies being measured. Below are the competency domains, subcomponent competencies, and specific content to be covered within each subcomponent.

AREA 1: COMPREHENSIVE ORAL DIAGNOSIS AND TREATMENT PLANNING

I. Collect medical and dental history
   - A. Evaluate medical history, e.g., past illnesses and conditions, family history, current illnesses and medications, medications and their effect on dental condition
   - B. Obtain dental history, e.g., age of previous prostheses, existing restorations, prior history of orthodontic/periodontic treatment, oral hygiene habits/adjuncts
   - C. Determine chief complaint
   - D. Determine psychosocial issues
   - E. Determine behavioral issues that affect relationship with patient

II. Perform comprehensive examination
   - A. Interpret radiographic series
   - B. Perform caries risk assessment
   - C. Determine periodontal condition
   - D. Perform head and neck examination
   - E. Screen for temporomandibular disorders
   - F. Assess vital signs
   - G. Perform clinical examination of dentition
   - H. Perform occlusal examination

III. Evaluate data to identify problems
   - A. List chief complaint
   - B. List medical problems
   - C. List stomatognathic problems
   - D. List psychosocial problems

IV. Work up problems and develop tentative treatment plan
   - A. Define each problem, e.g., severity/chronicity, classification
   - B. Determine if any additional diagnostic tests are needed
   - C. Develop differential diagnosis
   - D. Recognize need for referral(s)
   - E. Address pathophysiology of problem
   - F. Address short term needs
   - G. Address long term needs

H. Determine interactions of problems
I. Develop treatment options
J. Determine prognosis
K. Prepare patient information for informed consent

V. Develop final treatment plan
A. Establish rationale for treatment
B. Address all problems (any condition that puts the patient at risk in the long term)
C. Determine sequencing within the following framework
1. Systemic: medical issues of concern, medications and their effects, effect of diseases on oral condition, precautions, treatment modifications
2. Urgent: Acute pain/infection management, urgent esthetic issues, further exploration/additional information, oral medicine consultation, pathology
3. Preparatory: Preventive interventions, orthodontic, periodontal (Phase I, II), endodontic treatment, oral surgical treatment, TMD treatment, caries control, other temporization
4. Restorative: operative, fixed, removable prostheses, occlusal splints, implants
5. Elective: Esthetic (veneers, etc.), any procedure that is not clinically necessity, replacement of sound restoration for esthetic purposes, bleaching
6. Maintenance: Periodontic recall, radiographic interval, periodic oral examination, caries risk management

VI. Prepare documentation according to risk management standards

AREA 2: DIRECT RESTORATION

I. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class II amalgam or composite
II. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class III or IV composite
III. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class V glass ionomer, composite or amalgam
IV. Select case based on minimum criteria for direct restorations
    A. Class II – Any permanent posterior tooth
        1. Treatment needs to be performed in the sequence described in the treatment plan
        2. More than one test procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments
        3. Caries as shown on either of the two required films on an unrestored proximal surface must extend to the dentoenamel junction
        4. Tooth to be treated must be in occlusion
        5. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the dentition adjacent to the proposed restoration must be either natural tooth structure or a permanent restoration; provisional restorations or removable partial dentures are not acceptable adjacent surfaces
        6. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment
        7. Tooth with bonded veneer is not acceptable
        8. The lesion is not acceptable if it is in contact with circumferential decalcification

    B. Class III/IV – Any permanent anterior tooth
        1. Treatment needs to be performed in the sequence described in the treatment plan
        2. More than one test procedure can be performed on a single tooth. Teeth with multiple lesions may be restored at separate appointments.
        3. Caries as shown on the required film on an unrestored proximal surface must extend to the dentoenamel junction
        4. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the dentition adjacent to the proposed restoration must be either natural tooth structure or a permanent restoration; provisional restorations or removable partial dentures are not acceptable adjacent surfaces
        5. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment
        6. The lesion is not acceptable if it is in contact with circumferential decalcification

7. Approach must be appropriate for the tooth
8. Tooth with bonded veneer is not acceptable

C. Class V – Any permanent tooth
   1. Tooth must have a carious lesion that is clinically evident.
   2. Treatment needs to be performed in the sequence described in the treatment plan
   3. More than one test procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments
   4. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment; the lesion is not acceptable if it is in contact with circumferential decalcification
   5. New restoration must be separate from any existing restoration on the tooth

AREA 3: INDIRECT RESTORATION

I. Restore tooth to optimal form, function and esthetics with crown or onlay according to approved procedures and materials for indirect restorations.
   - A. Ceramic restoration must be onlay or more extensive
   - B. Partial gold restoration must be onlay or more extensive
   - C. Metal ceramic restoration
   - D. Full gold restoration
   - E. Facial veneer is not acceptable

II. Select case based on minimum criteria for indirect restorations.
   - A. Treatment needs to be performed in the sequence described in the treatment plan.
   - B. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be in need of endodontic treatment. Endodontically treated teeth must follow standard of care.
   - C. Tooth must have opposing occlusion that is stable.
   - D. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the tooth adjacent to the planned restoration must be either an enamel surface or a permanent restoration; temporary restorations or removable partial dentures are not acceptable adjacent surfaces
   - E. Tooth must require an indirect restoration at least the size of the onlay or greater.
   - F. Cannot replace existing or temporary crowns
   - G. Buildups may be completed ahead of time, if needed. Teeth with cast posts are not allowed.
   - H. Restoration must be completed on the same tooth and same patient by the same student
   - I. Validated lab or fabrication error will allow a second delivery attempt starting from a new impression or modification of the existing crown.
   - J. Digital media cannot be used to capture impressions.

AREA 4: REMOVABLE PROSTHODONTICS

I. Develop diagnosis and determine treatment options and prognosis for removable prosthesis
   - A. Obtain patient history, e.g., medical, dental, psychosocial
   - B. Evaluate chief complaint
   - C. Obtain radiographs and photographs
   - D. Perform clinical examination, e.g., hard/soft tissue charting, endodontic evaluation, occlusal examination, skeletal/jaw relationship, VDO, CR, MIP
   - E. Evaluate existing prosthesis and patient concerns
   - F. Obtain and mount diagnostic cast
   - G. Determine complexity of case, e.g., ACP classification
   - H. Present treatment options and prognosis assessment, e.g., complete denture, partial denture, overdenture, implant options, FPD
   - I. Analyze risks/benefits
   - J. Apply critical thinking and make evidence-based treatment decisions

II. Restore edentulous spaces with removable prostheses
   - A. Develop diagnosis and treatment plan for removable prosthesis
   - B. Obtain diagnostic casts
   - C. Perform diagnostic wax-up/survey framework design
   - D. Determine need for preprosthetic surgery and make necessary referral
   - E. Perform tooth modification and/or survey crowns
   - F. Obtain master impressions and casts
   - G. Obtain occlusal records
   - H. Try-in and evaluate trial dentures
   - I. Insert prosthesis
   - J. Provide post-insertion care
   - K. Apply standards of care, e.g., infection control, informed consent

III. Manage tooth loss transition with immediate or transitional prostheses
   - A. Develop diagnosis and treatment plan – tooth salvage/extraction decisions
   - B. Educate patient regarding healing process, denture experience, future treatment needs, etc
   - C. Plan surgical and prosthetic phases
   - D. Obtain casts, e.g., preliminary/final impressions
   - E. Obtain occlusal records
   - F. Perform diagnostic wax-up
   - G. Try-in and evaluate trial dentures
   - H. Manage and coordinate surgical phase
   - I. Insert immediate or transitional prosthesis
   - J. Provide post insertion care including adjustments, relines, patient counseling
   - K. Apply standards of care, e.g., infection control, informed consent

IV. Manage prosthetic problems
   - A. Assess real or perceived patient problems

B. Evaluate existing prosthesis
C. Perform uncomplicated repair, reline, re-base, re-set or re-do
D. Determine need for specialty referral
E. Obtain impression/record/information for laboratory use
F. Communicate needed prosthetic procedure to laboratory technician
G. Insert prosthesis and provide follow-up care
H. Perform in-office maintenance, e.g., prosthesis cleaning, clasp tightening, occlusal adjustment

V. Direct and evaluate laboratory services for prosthesis
A. Complete laboratory prescription
B. Communicate with laboratory technician
C. Evaluate laboratory work product, e.g., frameworks, processed dentures

AREA 5: ENDODONTICS

I. Apply case selection criteria for endodontic cases
   A. Meet AAE case criteria for minimum difficulty
      1. Treat simple morphologies of all teeth
      2. Treat teeth that include signs and symptoms of swelling and acute inflammation
      3. Treat teeth without previous complete or partial endodontic therapy
   B. Determine endodontic diagnosis
   C. Perform charting and diagnostic testing
   D. Take and interpret radiographs
   E. Determine pulpal diagnosis within approved parameters
      1. Within normal limits
      2. Reversible pulpitis
      3. Irreversible pulpitis
      4. Necrotic pulp
   F. Determine periapical diagnosis within approved parameters
      1. Within normal limits
      2. Asymptomatic apical periodontitis
      3. Symptomatic apical periodontitis
      4. Acute apical abscess
      5. Chronic apical abscess
   G. Develop endodontic treatment plans including referral, trauma, and management of emergencies

II. Demonstrate pretreatment preparation for endodontic treatment
   A. Manage pain control
   B. Remove caries and failed restorations
   C. Determine restorability
   D. Achieve isolation

III. Perform access opening
   A. Create indicated outline form
   B. Create straight line access
   C. Maintain structural integrity
   D. Complete unroofing of pulp chamber
   E. Identify all canal systems

IV. Perform shaping and cleaning techniques
   A. Maintain canal integrity
   B. Preserve canal shape and flow
   C. Apply protocols for establishing working length
   D. Manage apical control
   E. Apply disinfection protocols

V. Perform obturation techniques
   A. Apply obturation protocols
      1. Select and fit master cone
      2. Determine canal conditions before obturation

3. Verify sealer consistency and adequacy of coating

B. Demonstrate length control of obturation

C. Achieve dense obturation of filling material

D. Demonstrate obturation to a clinically appropriate coronal height

VI. Demonstrate completion of endodontic case

A. Achieve coronal seal to prevent re-contamination

B. Create diagnostic, radiographic and narrative documentation

VII. Provide recommendations for post-endodontic treatment

A. Recommend final restoration alternatives

B. Provide recommendations for outcomes assessment and follow-up

AREA 6: PERIODONTICS

I. Perform comprehensive periodontal examination
   A. Review medical and dental history
   B. Interpret radiographs
   C. Perform extra- and intra-oral examination
   D. Perform comprehensive periodontal data collection
      1. Evaluate plaque index, probing depths, bleeding on probing, suppuration, cementoenamel junction-gingival margin, clinical attachment level and furcations
      2. Perform occlusal assessment
   E. Evaluate periodontal etiology/risk factors (local and systemic)

II. Determine diagnosis and develop periodontal treatment plan
   A. Determine periodontal diagnosis
   B. Formulate initial periodontal treatment plan
      1. Determine whether to treat or refer to periodontist
      2. Discuss with patient etiology, benefits of treatment, specific risk factors, alternatives and patient-specific oral hygiene instructions
      3. Determine nonsurgical periodontal therapy including management of contributing factors of periodontitis
      4. Determine need for re-evaluation
      5. Determine recall interval (if no re-evaluation needed)

III. Perform nonsurgical periodontal therapy
   A. Detect supra- and subgingival calculus
   B. Perform periodontal instrumentation
      1. Remove calculus
      2. Remove plaque
      3. Remove stains
   C. Minimize tissue trauma
   D. Provide effective anesthesia

IV. Perform periodontal re-evaluation
   A. Evaluate effectiveness of oral hygiene care
   B. Assess periodontal outcomes
      1. Review medical and dental history
      2. Review radiographs
      3. Perform comprehensive periodontal data collection (e.g., evaluate plaque index, probing depths, bleeding on probing, suppuration, cementoenamel junction-gingival margin, clinical attachment level, furcations, tooth mobility)
   C. Discuss with patient etiology, benefits of treatment, alternatives, patient-specific oral hygiene instructions, and modification of specific risk factors
   D. Determine further periodontal needs including need for referral to a periodontist and periodontal surgery
   E. Establish recall interval for periodontal treatment

SECTION 7 – EVALUATION SYSTEM

A standardized evaluation system will be used as the tool to evaluate students' performance in the competency examinations. To implement the portfolio examination, the competencies and their subcomponents defined in Section 5 will provide the framework for the evaluation system that will assess the students' competencies in the procedures. Faculty from all Board-approved dental schools must be involved in the process so that the final evaluation system represents rating criteria applicable to students regardless of their predoctoral programs.

The evaluation system is intended to be used for *summative* decisions (high-stakes, pass/fail decisions) rather than formative decisions (compilation of daily work with faculty feedback for learning purposes). The evaluation system provides quantitative validity evidence for determining clinical competence in terms of numeric scores.

APPLICABLE STANDARDS

The evaluation system must meet psychometric criteria to provide the measurement opportunity for success for all students.

Standard 3.20 "The instructions presented to test takers should contain sufficient detail so that test takers can respond to a task in the manner that the test developer intended. When appropriate, sample material, practice or sample questions...should be provided to test takers prior to the administration of the test or included in the testing material as part of the standard administration instructions." (p. 47)

Standard 3.22 "Procedures for scoring and, if relevant, scoring criteria should be presented by the test developer in sufficient detail and clarity to maximize the accuracy of scoring. Instructions for using rating scales or for deriving scores obtained by coding, scaling, or classifying constructed responses should be clear." (p. 47)

Standard 14.17 "The level of performance required for passing a credentialing test should depend on the knowledge and skills necessary for acceptable performance in the occupation or profession and should not be adjusted to regulate the number or proportion of persons passing the test." (p. 162)

BEHAVIORALLY ANCHORED RATING SCALES

Behaviorally anchored rating scales have unique measurement properties which have been used extensively in medical and dental education as a tool to assess performance. They rely on critical incidents of behavior which may be classified into dimensions unique and independent of each other in their meaning. Each performance dimension is arrayed on a continuum of behaviors and examiners must select the behaviors that most closely describe the student's performance.

There are several steps to develop behaviorally anchored rating scales for the portfolio examination evaluation system:

1. Use the competencies and their associated subcomponents defined by the table-top job analysis discussed in Section 5 as the framework for the evaluation system, e.g., comprehensive oral diagnosis and treatment planning, direct restoration, indirect restoration, removable prosthodontics, endodontics, periodontics

2. Generate critical incidents of ineffective and effective behavior

3. Create performance dimensions that describe the qualities of groups of critical incidents

4. Define performance dimensions in terms of numeric ratings, e.g., 1 to 5, 1 to 7, 1 to 9

5. Retranslate (reclassifying) the critical incidents to ensure that the incidents describe the performance dimensions

6. Identifying six to seven incidents for each performance dimension

7. Refine standardized criteria for each of the competency domains and their subcomponent competencies

8. Establish minimum acceptable competence criteria (passing criteria) for competency examinations

MINIMUM COMPETENCE

The passing standard for all of the competency examinations will be built into the rating scales when the rating criteria are developed. The rating criteria for minimum competence is best developed by representative faculty who have a solid conceptual understanding of standardized rating criteria and how the criteria will be applied in an operational setting.

Table 2 – Non-inclusive examples of quality evaluation criteria for casting preparations[1]

Rating	Outline	Internal	Retention	Marginal Finish
5	• Outline fulfills all criteria for proper extension • Margins terminate exactly where specified • Margins terminate on smooth, clean, finshable tooth structure	• Optimal reduction to allow for proper contour, strength and esthetics of completed restoration • Indicated bases and/or build-up properly placed	• Maximum length of axial first plane walls and internal walls compatible with periodontal health, pulpal health and strength of tooth. • Secondary retentive features placed as indicated with maximum length, property depth, parallel with path of insertion,	• Enamel walls supported by dentin • Margins terminate with proper angulation • Finish lines are smooth and free of irregularities • Finish lines are continuous • Preparation is isolated to allow for evaluation
4	• Outline form does not fulfill all criteria for proper extension in one area but is still acceptable and does not require alteration • Minimal abrasion of the adjacent tooth in one area that requires smoothing	• Deviates from ideal in one area but still within acceptable range; allows for fabrication of a satisfactory restoration	• Retention adequate but not optimal in an isolated area	• Deviates from the ideal in one area but is still within acceptable range and will allow for fabrication of satisfactory restoration
3	• Outline form does not fulfill all criteria for proper extension in multiple areas but is acceptable and does not require alteration	• Deviates from ideal in multiple areas but still within acceptable range	• Retention adequate but not optimal in multiple areas	• Deviates from the ideal in multiple areas but is still within acceptable range and will allow for fabrication of satisfactory restoration
2	• Outline form does not fulfill the criteria for proper extensions and is unacceptable requiring alteration of preparation • Cutting the adjacent tooth requires recontouring adjacent tooth	• Deviates from the acceptable range and will not allow for fabrication without modification • Caries remaining in preparation	• Retention is not satisfactory and requires modification	• Deviates from the ideal in more than one area and requires modification to fabricate an acceptable restoration
1	• Outline form does not fulfill all criteria for proper extension and requires alteration of the preparation • Cuts the adjacent tooth • Damages the periodontium	• Severely deviates from acceptable in one area and deviates from acceptable in multiple areas • Mechanical exposure of pulp or perforation of root	• Retention severely inadequate and requires extensive modification	• Severely deviates from the ideal in one or more areas and requires modifications to fabricate an acceptable restoration

[1] Adapted from University of Southern California quality evaluation criterion for casting preparations. Not all anchors from the criteria were used.

SECTION 8 – EXAMINER TRAINING AND CALIBRATION

In order to meet the standard required for psychometrically sound examinations, training and calibration procedures must be linked back to the competencies defined by a job analysis and to the evaluation system. All the schools must calibrate their faculty to the same rating criteria. Again, faculty from all Board-approved dental schools must be involved in the process to ensure those faculty apply the same standards to students' performance. It is very important for the Board to be aware of threats to the validity of the examination that arise from improper training and calibration. If the examiners are improperly trained and calibrated, the examiners would compromise the portfolio examination's ability to produce results that warrant valid conclusions about students' clinical competence.

APPLICABLE STANDARDS

Standard 5.1 "Test administrators should follow carefully the standardized procedures for administration and scoring as specified by the test developer, unless the situation or a test taker's disability dictates an exception should be made." (p. 63)

Standard 5.8 "Test scoring services should document the procedures that were followed to assure accuracy of scoring. The frequency of scoring errors should be monitored and reported to users of the service on reasonable request. Any systematic source of scoring errors should be corrected." (p. 64)

Standard 5.9 "When test scoring involves human judgment, scoring rubrics should specify criteria for scoring. Adherence to established scoring criteria should be monitored and checked regularly. Monitoring procedures should be documented." (p. 65)

EXAMINER SELECTION CRITERIA

Examiners will be dental school faculty trained to use a standardized evaluation system through didactic and experiential methods. Each examiner will be required to submit credentials to document their qualifications and experience in conducting examinations in an objective manner.

During hands-on training, examiners will be provided feedback about their performance and how their scoring varies from their fellow examiners. Examiners whose error rate exceeds a prespecified percentage error will be re-

calibrated. If any examiner is unable to be re-calibrated, the Board would dismiss the examiner from the portfolio examination process.

PROCESS

Examiners will be asked to review a variety of materials, e.g. online overview of process, examiner training manuals, slide presentations (Powerpoint), sample cases, sample documentation, DVD, etc., prior to participating in the actual rating of students.

Training activities will have multiple examples of performance that clearly relate to the specific judgments that examiners are expected to provide during the competency examinations. Hands-on training sessions should include an overview of the rating process, clear examples of rating errors, examples of how to mark the grading forms, a series of several sample cases for examiners to hone their skills, and numerous opportunities for training staff to provide feedback to individual examiners.

There are several steps in the process:

1. Establish agreement among all the schools as to the level of performance represented by the competencies represented in the evaluation
2. Train all faculty from all the dental schools involved in portfolio examination to use standardized criteria to agreed upon set standards for interrater reliability
3. Build in a process for faculty from other schools to participate in evaluating students in competency examinations
4. Develop an evaluation system and calibration process that is iterative and involves individual feedback so that mid-course modifications can be made to improve the system as necessary
5. Conduct calibration regularly to maintain common standards as a ongoing process

TYPES OF RATING ERRORS

The competency examinations have the potential to introduce error to the score that is unrelated to the reliability of the examination. Several common rating errors can interfere with the rating process by diminishing the accuracy, effectiveness and fairness of the ratings (Cascio, 1992). Rating errors can be avoided by developing scoring criteria that clearly define acceptable and unacceptable performance.

- Halo effect: Inappropriate generalization from one aspect of an individual's performance to all areas of the person's performance

- Contrast effect: Tendency to rate persons in comparison to others

- Stereotyping: Tendency to generalize, favorably or unfavorably, across groups and ignore individual differences

- Central tendency: Inclination to rate students in the middle of the rating scale even when student performance merits higher or lower ratings

- Negative/positive skew: Inclination to rate students higher or lower than their performance warrants

- Recency effect: Tendency to discount events that occurred early in the rating period and overemphasize those that occurred later.

CROSS-TRAINING OF EXAMINERS

Training sessions will be conducted on an ongoing basis in both northern and southern California, with the expectation that examiners participating in the portfolio examination process will have ample opportunities to participate in competency examinations conducted at a school other than their own. It may not be necessary to have examiners from other schools rate each and every student; however, periodic participation of examiners from outside schools can strengthen the credibility of the process and ensure objectivity of ratings.

SECTION 9 – AUDIT PROCESS

The purpose of the audit should be to determine if the schools are following the procedures established for the evaluation system and calibration process. The design of the evaluation system and the calibration process will be sufficiently robust to ensure that only the students who meet the passing criteria would be issued a license. The Dental Board should oversee the auditing process and establish standards necessary for public protection in cooperation with dentists who are knowledgeable of the portfolio examination and licensing standards.

During an audit, in-depth information is obtained about the administrative and psychometric aspects of the portfolio examination, much like the accreditation process. An audit team comprised of faculty from the dental schools and persons designated by the Board would verify compliance with accepted professional testing standards, e.g., Standards for Educational and Psychological Testing, as well as verify whether the portfolios have been implemented according to the goals of the portfolio process.

APPLICABLE STANDARDS

Standard 3.15 "When using a standardized testing format to collect structured behavior samples, the domain, test design, test specifications and materials should be documented as for any other test. Such documentation should include a clear definition of the behavior expected of the test takers, the nature of expected responses, and any materials or directions that are necessary to carry out the testing." (p. 46)

PROCESS

There are several steps in the process:

1. Develop documents for evaluating the schools compliance with the evaluation system and calibration process
2. Train auditors in the evaluation system and calibration process
3. Develop criteria for auditors to apply in reviewing schools' compliance with the evaluation system and calibration process
4. Select auditors who can maintain the principle of independence
5. Develop self-assessment protocols and schedules for schools to complete

ROLE OF AUDITORS

The audit team is responsible for verification of the examination process and examination results, and, collection and evaluation of specific written documentation which respond to a set of standardized audit questions and summarizing the findings in a written report. A site visit can be conducted to verify portfolio documentation and clear up unresolved questions.

The audit team would be comprised of persons who can remain objective and neutral to the interests of the school being audited. The audit team should be knowledgeable of subject matter, psychometric standards, psychometrics and credentialing testing.

The audit team should be prepared to evaluate the information provided in a written report that documents the strengths and weaknesses of each school's administrative process and provides recommendations for improvement.

DOCUMENTATION FOR VALIDITY EVIDENCE

Each student will have a portfolio of completed, signed rating (grade) sheets which provide evidence that clinical competency examinations in the six areas of practice have been successfully completed.

In addition to the signed rating (grade) sheets, there is content-specific documentation that must be provided. A list of acceptable documentation is presented on the following page.

Table 3 – Content-specific documentation

COMPREHENSIVE ORAL DIAGNOSIS AND TREATMENT PLANNING	• Full workup of case
DIRECT RESTORATION	• Restorative diagnosis and treatment plan • Preoperative radiographs, e.g., original lesion in Class II, III, IV • Postoperative radiographs including final fill
INDIRECT RESTORATION	• Restorative diagnosis and treatment plan • Preoperative radiographs • Postoperative radiographs including successfully cemented crown or onlay
REMOVABLE PROSTHODONTICS	• Removable prosthodontic diagnosis and treatment plan • Preoperative radiographs illustrating treatment condition • Preoperative and postoperative intraoral photographs of finished appliance
PERIODONTICS	• Periodontal diagnosis and treatment plan • Charted pocket readings • Preoperative radiographs including subgingival calculus • Postoperative radiographs • Follow-up report
ENDODONTICS	• Endodontic diagnosis and treatment plan • Preoperative radiographs of treatment site • Postoperative radiographs of treatment site

SECTION 10 – RESEARCH FINDINGS

PSYCHOMETRIC ISSUES

Several researchers comment that if portfolios are used for summative rather than formative purposes, it must meet stringent psychometric requirements including standardization, rater training with structured guidelines for making decisions, and large numbers of examiners to average out rater effects (Driessen, van der Vleuten, Schuwirth, Tartwijk & Vermunt, 2005, p. 215; Davis & Ponnamperuma, 2005, Friedman Ben-David, Davis, Harden, Howie, Ker, & Pippard, 2001).

Friedman et al. (2001) note that the validity of the inferences made about the portfolio depend on the reliability of the test. If the test scores or ratings suffer from low interrater agreement or poor sampling, inferences cannot be made. Moreover, there should be a clear definition of the purpose of the portfolio and identification of the competencies to be assessed. Webb, Endacott, Gray, Jasper, McMullan and Scholes (2003) and McMullan (2003) cite several criteria that should be used to evaluate portfolio assessments, namely, explicit grading criteria, evidence from a variety of sources, internal quality assurance processes, and external quality assurance processes.

Content validity is important in developing an examination for initial licensure (Chambers, 2004) such that there should be a validation process that inquires whether tasks being evaluated should be representative of tasks critical to safe and effective practice. A recent paper by Patterson, Ferguson, and Thomas (2008) calls for validation by using a job analysis to identify core and specific competencies.

A recent paper entitled "Point/Counterpoint: Do portfolio assessments have a place in dental licensure?" addresses many of these issues specifically as they pertain to the purpose of licensure rather than education (Hammond & Buckendahl, 2006; Ranney & Hambleton, 2006).

Hammond and Buckendahl do not support the use of portfolios for dental licensure. They cite two issues as important in considering the use of portfolio assessments for licensure purposes. First, standardizing the training and evaluation across a broad range of locations would be difficult. Second, demonstrations of abilities in past records would need to be verified so that there is an evaluation of the current range of competencies. These authors contend that the portfolio does not provide an assessment of minimum skills that is administered *independent* of the training program to support licensure decisions;

and therefore, provides no external validation and verification of the students' competence. Moreover, there may be measurement error, or low reliability, within the system as a result of errors in content sampling, number of observations of performance, number of examiners rating the student's performance, assumptions of unidimensional relationships between items, lack of interrater agreement, and reliance on pairs rather than triads of examiners for all students.

In an opposing point of view in the same article, Ranney and Hambleton (2006) support the use of portfolios for dental licensure. According to these authors, testing agencies have published little or no data to allow an assessment of reliability of validity of their examinations. Variability in the reliability of clinical licensure examinations and pass rates among testing agencies may reflect lack of reliability or validity in the examination process, and, omission of skills necessary to practice safely at the entry level, not just changes in student populations. The authors recognize that several criteria would need to be met before portfolio assessment could be implemented. The most important of these criteria are: administration by independent parties, inclusion of a full continuum of student competencies for comprehensive evaluation, and, evaluating competence within the context of a treatment plan designed to meet the patient's oral health care needs. In their discussion, the authors believe that portfolio assessments could work if the developers considered which tasks to measure, how the tasks would be scored, calibration protocols for examiners, and how performance expectations would be set.

INITIAL LICENSURE REQUIREMENTS IN OTHER JURISDICTIONS

According to the American Association of Dental Examiners "Composite" issued in January 2009, virtually all states and U. S. territories require applicants to pass an examination administered by the National Board of Dental Examiners.

- Forty-seven jurisdictions accepted a regional clinical examination, e.g., WREB, SRTA, CRDTS or national clinical, e.g., ADEX, ADLEX.
- Four jurisdictions, other than California, administered a state clinical examination
- Forty-three jurisdictions administered a jurisprudence examination
- Four states, other than California, granted licensure after completion of an accredited, 12-month, postgraduate residency program
- Six states allow applicants to take any state or regional clinical examination; Virginia explicitly states that the clinical examination must use live patients
- Two states (Montana and Utah) accept California's clinical examination

Table 4 – Summary of existing requirements for initial licensure[2]

State	National Board	Regional clinical	State clinical	Jurisprudence	Other
AL	Y	N	Y	Y	
AK	Y	Y (WREB)	N	Y	
AZ	Y	Y (WREB)	N	Y	
AR	Y	Y (SRTA)	N	Y	
CA	Y	Y (WREB)	Y	Y	PGY-1
CO	Y	Y (CRTDS)	N	Y	
CT	Y	Y (NERB OR DSCE)	N	N	PGY-1
DE	Y	N	Y	Y	DOR
District of Columbia	Y	Y	Y	Y	
FL	Y	N	Y	Y	
GA	Y	Y (CRDTS)	N	Y	
HI	Y	N	N	N	ADEX
ID	Y	Y (WREB, CRDTS)	N	Y	ADEX
IL	Y	N	N	N	ADEX
IN	Y	Y (WREB, SRTA, CRDTS, NERB)	N	Y	
IA	Y	Y (CRDTS, WREB)	N	Y	ADEX
KS	Y	Y (WREB, SRTA, CRDTS, NERB, CITA)	Y	Y	
KY	Y	Y (SRTA, WREB, CRDTS, NERB)	N	Y	ADEX not accepted
LA	Y	Y (CITA, CRDTS, NERB, SRTA, WREB)	N	Y	ADEX
ME	Y	Y (NERB)	N	Y	
MD	Y	Y (NERB)	N	Y	
MA	Y	Y	N	Y	
MI	Y	Y (NERB, DSCE)	–	–	
MN	Y	Y (NDEB, WREB)	N	Y	PGY-1, ADLEX, ADEX
MS	Y	Y	N	Y	
MO	Y	Y (Any state or regional examination)	N	Y	

[2] Examination acronyms for states which specified regional examinations: ADEX = American Board of Dental Examiners; ADLEX = American Dental Licensing Examination; CITA = Council of Interstate Testing Agencies; CRTDS = Central Regional Dental Testing Service; DOR = Dental Operating Rooms at Naval dental facilities; DSCE = Dental Simulated Clinical Examination; NERB = North East Regional Board; NDEB = National Dental Examining Board of Canada; SRTA = Southern Regional Testing Agency; WREB = Western Regional Examining Board

State	National Board	Regional clinical	State clinical	Jurisprudence	Other
MT	Y	Y (WREB, CRDTS, WREB, SRTA, NERB)	N	Y	State clinical examinations from CA, DE, FL, and NV
NE	Y	Y (CRDTS, NERB)	N	Y	
NV	Y	N	–	Y	ADEX; no licensure by credential
NH	Y	Y (NERB)	N	Y	
NJ	Y	Y (NERB)	N	Y	ADEX
NM	Y	Y (WREB, CRDTS)	N	Y	
NY	Y	N	N	N	CDA approved residency; one-time jurisprudence examination
NC	Y	Y (CITA)	N	Y	Sterilization/infection control examination
ND	Y	Y (NERB, CRDTS)	N	Y	ADEX
OH	Y	Y (CRDTS, SRTA, WREB, NERB)	N	Y	
OK	Y	Y (WREB)	N	Y	
OR	Y	Y	N	Y	Accepts any state or regional examination
PA	Y	Y (NERB)	N	N	ADLEX
Puerto Rico	Y	CITA	Y	Y	CITA in lieu of state clinical examination
RI	Y	Y (NERB)	N	N	
SC	Y	Y (SRTA, CRDTS)	N	Y	ADLEX
SD	Y	Y (CRDTS, WREB)	N	Y	Accepts any state or regional examination for licensure by credential
TN	Y	Y (SRTA, WREB)	N	N	
TX	Y	Y	–	Y	Accepts any state or regional examination for licensure by credential
UT	Y	Y (WREB, SRTA, NERB, CRDTS)	N	N	California state examination, Hawaii examination
VT	Y	Y (NERB, WREB, SRTA, CRDTS, CITA)	N	Y	

State	National Board	Regional clinical	State clinical	Jurisprudence	Other
VA	Y	Y (SRTA, WREB, DRDTS, NERGE, CITA)	--	Y	Accepts any state or regional examination for licensure by credential (only if live patients used)
U. S. Virgin Islands	--	--	--	--	
WA	Y	Y	N	Y	PGY-1; Accepts any state or regional examination
WV	Y	Y	N	Y	Any state or regional examination
WI	Y	Y (CRDTS, WREB, NERB)	N	Y	ADEX I and II
WY	Y	Y (CRDTS, WREB, NERB)	N	Y	Part IV of ADEX

COMPARISON OF REQUIREMENTS IN THE U.S. AND CANADA

In their 2001 review of dental education and licensure, the Council on Dental Education of the American Dental Association (ADA) compared practices for initial dental licensure in the United States and Canada. Their findings indicate that initial licensure in the United States and Canada are very similar; however, Canada relies on the use of the OSCE, which requires students to answer multiple-choice questions about radiographs, case histories, and/or models in a series of stations. In the OSCE, simulated patients (manikins) rather than actual patients are used as subjects for examination procedures.

Table 5 – Comparison of practices in U. S. and Canada for initial licensure

Requirement	United States	Canada
Graduation from an accredited program	Yes; program is accredited by the ADA Commission on Dental accreditation	Yes; program is accredited by the Commission on Dental Accreditation of Canada
Written examination	Yes: National Dental Board Examinations (NDBE) Parts I and II	Yes; National Dental Examining Board of Canada Written Examination (NDEB)
Clinical examination	• Regionally administered clinical examinations Central Regional Testing Services (CRTS); Northeast Regional Examining Board (NERB), Southern Regional Testing Agency (SRTA), Western Regional Examining Board (WREB) offered once to multiple times, depending on the testing agency • 10 states (CA, DE, FL, HI, IN, LA, MS, NC, NV plus Puerto Rico and the Virgin Islands) offer state administered examinations • Each state determines which clinical examination results are accepted for the purpose of licensure • All states require completion of both written and clinical examinations before being eligible for licensure • Some states also require additional criteria such as proof of malpractice insurance, certification in Basic Life Support, or a jurisprudence examination	• OSCE offered three times a year • Quebec requires an NDEB certificate or a provincial examination. • Some provinces require completion of an ethics examination

EXISTING COMPETENCY EXAMINATIONS

As expected, all of the California schools included competencies which met minimum standards set forth by the Commission on Dental Accreditation for predoctoral dental education programs (2008, Standard 2-25, p. 15): "At a minimum graduates must be competent in providing oral health care with the scope of general dentistry, as defined by the school, for the child, adolescent, adult, and geriatric patient, including:

a) Patient assessment and diagnosis;
b) Comprehensive treatment planning;
c) Health promotion and disease prevention;
d) Informed consent;
e) Anesthesia, and pain and anxiety control;
f) Restoration of teeth;
g) Replacement of teeth;
h) Periodontal therapy;
i) Pulpal therapy;
j) Oral mucosal disorders;
k) Hard and soft tissue surgery;
l) Dental emergencies;

m) Malocclusion and space management; and,
n) Evaluation of the outcomes of treatment.

Key faculty from each of the five Board-approved schools were interviewed regarding the clinical dimensions of practice assessed in competency examinations within their predoctoral programs. All of the schools provided a list of the clinical competencies assessed during predoctoral training. A list of each school's competency examination is presented in the Tables 6, 7, 8, 9 and 10.

Table 6 – Competency examinations: Loma Linda University

Comprehensive diagnosis and treatment planning	• Oral diagnosis examination • Radiology interpretation (FMX pathology) • Radiology interpretation (Normal and errors) • Radiology techniques
Direct restoration	• Class II composite resin • Class II amalgam • Class III composite
Indirect restoration	• Full gold crown, partial coverage crown, full coverage ceramic crown, fixed partial denture *or* multiple tooth restoration
Removable prosthodontics	• Rest seat preparation • RPD design • CD setup
Periodontics	• Preclinical OSCE (5) • Scaling and root planning (2) • Oral health care (2)
Endodontics	• Endodontic qualifying examination (to treat patients in clinic) • Endodontic section of Fall mock board • Endodontic qualifying examination (to take WREB)

Table 7 – Competency examinations: University of California Los Angeles

Comprehensive diagnosis and treatment planning	• Oral diagnosis • Head and neck examination • Treatment planning • Caries management by risk assessment
Direct restoration	• Class II amalgam (2) • Class II composite (1) • Class III composite or Class V composite (2) • Two buildups (core, pin, prefabricated post and core, *or* dowel core)
Indirect restoration	• Two restorations (PFM, bonded ceramic, full gold crown *or* partial veneer crown)
Removable prosthodontics	• Complete denture • Immediate full denture • Removable partial denture • Reline
Periodontics	• Periodontal diagnosis and treatment plan • Periodontal instrumentation • Re-evaluation of Phase I therapy • Periodontal surgery
Endodontics	• Endodontic case portfolio

Table 8 – Competency examinations: University of California San Francisco

Comprehensive diagnosis and treatment planning	• Medical/dental history taking • Infection control • Practice management • Oral diagnosis and treatment planning OSCE • Caries risk assessment • Complete oral examination/treatment planning • Radiology • Emergency • Baseline skills attainment • Pediatric comprehensive oral examination • Outcomes of care
Direct restoration	• Class I composite or preventive resin restoration • Class I amalgam • Class II amalgam • Class II composite • Class III or IV composite • Class V composite, glass ionomer *or* amalgam • Pediatric restorative
Indirect restoration	• Mounted diagnostic cast • Die trimming • Casting (PFM, all gold, *or* all ceramic crown)
Removable prosthodontics	• Removable prosthodontics (partial *or* full denture)
Periodontics	• Instrument sharpening • Instrument identification and adaptation • Scaling and root planning
Endodontics	• Single-root root canal • Multi-root root canal on typodont

Table 9 – Competency examinations: University of the Pacific

Comprehensive diagnosis and treatment planning	• Oral diagnosis and treatment planning
Direct restoration[3]	• Class I resin • Class II resin • Class II amalgam • Class III resin • Class V resin
Indirect restoration	• All cases evaluated for case management, buildup (if needed), preparation and temporization • Crown preparation and crown (FVM, PFM *or* all ceramics) • CIMOE (cementation) • Impression
Removable prosthodontics	• Complete denture, immediate complete denture *or* other removable prosthestic device
Periodontics	• Periodontal oral diagnosis and treatment planning • Periodontal diagnostic competency • Calculus detection and root planing • Instrument sharpening • Periodontal re-evaluation
Endodontics	• Endodontic radiographic technique • Cleaning and shaping (single canal) • Coronal access anterior • Coronal access posterior • Obturation (single canal)

[3]All direct restoration cases are evaluated for case management, preparation and restoration. Typically Class III and Class V resins are performed in the anterior segments; several posterior Class II restorations are completed including a mandatory mock board scenario—mixed between amalgam and resin

Table 10 – Competency examinations: University of Southern California

Competency domain	Specific competencies
Comprehensive diagnosis and treatment planning	• Oral radiology (OSCE in radiology) • Physical evaluation • Ultrasonic instrumentation/ultrasonic scaler • OSCE in vital signs, extra- and intraoral examination and infection control
Direct restoration	• Class II amalgam • Composite restoration (Class II, III, IV, *or* V)
Indirect restoration	• Crown preparation (PFM, full gold, partial veneer gold, *or* ceramic) • Crown cementation (PFM, full gold, partial veneer gold, *or* ceramic)
Removable prosthodontics	• Preliminary impression • Outline tray(s)/ custom tray(s) • Final impression(s) • Final survey • Framework try-in (retention/occlusion) • Jaw record(s)/ tooth selection • Teeth try-in/ remount jig • Prosthesis placement/ clinical remount • Final adaptation and articulation
Periodontics[4]	• Diagnosis and comprehensive treatment planning • Ultrasonic instrumentation for scaling and root planning • Scaling and root planning • Mock board examination (WREB compatible)
Endodontics	• Access • Instrumentation • Obturation

CALIBRATION OF EXAMINERS

During visits to the dental school clinics and interviews with faculty, it was clear that the dental schools did an exceptional job in calibrating their examiners and were consistent in their methodology to ensure that common criteria were used to evaluate students' performance on competency examinations. The faculty were calibrated and re-calibrated to ensure consistency in their evaluation of the student competencies and the processes used by the dental schools for assessing competencies was very similar. In every case, minimum competency was built into the rating scales used to evaluate the students in their competency examinations.

The general rule was that two examiners must concur on failing grades. If there is disagreement between the two examiners, a third examiner was asked to grade the student. One school specifically mentioned that examiners were designated full-time faculty who were familiar with the grading criteria and the logistics of competency examinations. Other schools mentioned that their examiners (part-time and full-time faculty) were provided extensive materials to

[4] Diagnosis and comprehensive treatment planning, ultrasonic instrumentation, scaling and root planing are performed in the junior year; mock board examination performed in the senior year

read and review prior to hands-on training with experienced examiners. These materials included detailed examiner training manuals, detailed slide presentations (PowerPoint), sample cases, and sample documentation. Hands-on training and calibration sessions were conducted to ensure that the examiners understood the evaluation system and how to use it.

SECTION 11 - REFERENCES

Albino, J. E. N., Neumann, G. A., Kramer, S. C., Andrieu, S. C., Henson, L., Horn, B., & Hendricson, W. D. (2008) Assessing dental students' competence: Best practice recommendations in the performance assessment literatures and investigation of current practices in predoctoral education. Journal of Dental Education, 72, 1405-1435.

American Association of Dental Examiners Composite (20th ed.). (2009). Chicago, IL: Author.

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (1999). Standards for educational and psychological testing. Washington, DC: Author.

Cascio, W.F. (1992). Managing human resources (3rd ed.) New York: McGraw-Hill.

Chambers, D. W. (2004). Portfolios for determining initial licensure competency. Journal of the American Dental Association, 135, 173-184.

Chambers, D. W., & Gerrow, J. D. (1994). Manual for developing and formatting competency statements. Journal of Dental Education, 58(5), 361-366.

Commission on Dental Accreditation (2008). Accreditation Standards for Dental Education Programs. Chicago, IL: American Dental Association.

Comparative analysis of competencies in the California dental examination and advanced clinical residency programs. (2007). Folsom, CA: Comira.

Davis, M. H., & Ponnamaperuma, G. G. (2005). Portfolio assessment. Journal of Veterinary Medical Education, 332(3), 279-284.

Dental education and licensure in the United States and Canada: A comparison. (2001). Chicago, IL. American Dental Association, Council on Dental Education and Licensure.

DOE Handbook: Table-top job analysis. (DOE-HDBK1076-94). (1994). Washington, DC: Department of Energy.

Driessen, E., van der Vleuten, C., Schuwirth, L., van Tartwijk, J., & & Vermunt, J. (2005). The use of qualitative research criteria for portfolio assessment as an

alternative to reliability evaluation: A case study. Medical Education, 39(2), 214-220.

Friedman Ben-David, M., Davis, M., Harden, R., Howie, P., Ker, J., & Pippard, M. (2001). AMEE Guide No. 24. Portfolios as a method of student assessment. Medical Teacher, 23(6), 535-551.

Hammond, D. & Buckendahl, C. W., (2006). Point/Counterpoint: Do portfolio assessments have a place in dental licensure?: No portfolio assessment should not be used in dental licensure. Journal of the American Dental Association, 137, 30-41.

Loma Linda University School of Dentistry: Clinical competency examinations. (2009). Loma Linda, CA: Author.

McMullan, M. (2003). Portfolios and assessment of competence: A review of the literature. Journal of Advanced Nursing, 41(3), 283-294.

Patterson, F., Ferguson, E. & Thomas, S. (2008). Using job analysis to identify core and specific competencies: Implications for selection and recruitment. Medical Education, 42, 1195-1204.

Ranney, R. R. & Hambleton, R. (2006). Point/Counterpoint: Do portfolio assessments have a place in dental licensure?: Yes, portfolio assessments can be used successfully in dental licensure. Journal of the American Dental Association, 137, 30-41.

Webb, C., Endacott, R., Gray, M. A., Jasper, M. A., McMullan, M. & Scholes, J. (2003) Evaluating portfolio assessment systems: What are the appropriate criteria? Nurse Education Today, 23, 600-609.

University of California Los Angeles School of Dentistry: Clinical competency examinations. (2009). Los Angeles, CA: Author.

University of California San Francisco School of Dentistry: Clinical competency examinations. (2009).San Francisco, CA: Author.

University of the Pacific School of Dentistry: Clinical competency examinations. (2009). San Francisco, CA: Author.

University of Southern California School of Dentistry: Clinical competency examinations. (2009). Los Angeles, CA: Author.

APPENDIX A – CONSULTANT BACKGROUND

NORMAN R. HERTZ, PH.D.
DIRECTOR OF PSYCHOMETRIC SERVICES

Dr. Hertz is the Director of Psychometric Services at Comira. He is a licensed psychologist with more than 25 years of experience in the measurement field. He received his Bachelor of Arts degree from Baylor University in psychology, and his Master of Science degree in psychology and his Ph.D. in industrial-organizational psychology from the University of Memphis.

He was the managing partner of HZ Assessments, a private psychometric consulting firm that he co-founded after his retirement from the California Department of Consumer Affairs in 2001. He has provided psychometric expertise to national and international organizations and has developed licensing and certification examinations for several western states including California, Washington, Oregon, and Arizona. He has extensive experience in private industry and government settings and has conducted validation studies, developed licensing and certification examinations, and established cut scores for more than 50 professions, ranging from the construction trades to medical specialties. He specializes in conducting psychometric audits of examination programs.

Prior to HZ Assessments and Comira, Dr. Hertz was the Chief of the Office of Examination Resources at the California Department of Consumer Affairs for 15 years. During his tenure at Consumer Affairs, he handled the most sensitive aspects of examination programs for more than 30 boards including expert witness testimony for legislative committees.

He has chaired and presented at the annual meetings of the Council on Licensure, Enforcement and Regulation and the National Council on Measurement in Education and has also co-authored several technical papers and journal articles. He is a member of the American Psychological Association, the Society for Industrial Organizational Psychology, the American Educational Research Association, the National Council on Measurement in Education, and the Council on Licensure, Enforcement and Regulation.

ROBERTA N. CHINN, PH.D
SENIOR PSYCHOMETRIC SPECIALIST

Dr. Roberta Chinn is the Senior Psychometric Specialist at Comira. She has more than 19 years of experience in the measurement field. She received her Bachelor of Science degree from the University of California at Davis in psychology, her Master of Arts degree from the University of the Pacific in experimental psychology, and her Ph.D. in experimental and cognitive psychology from Louisiana State University.

She was a general partner in HZ Assessments, a private psychometric consulting firm that she co-founded in 2001. Prior to HZ Assessments and Comira, Dr. Chinn was a senior psychometric consultant at the Office of Examination Resources at the California Department of Consumer Affairs for over 11 years. During her tenure at Consumer

Affairs, she handled sensitive aspects of examination programs for more than 30 boards and was instrumental in the development of standardized practical examinations, applied law and ethics examinations, and standardized oral examinations.

She has developed licensing and certification examinations for several western states (e.g., California, Colorado, Washington, Oregon, Arizona) as well as for national credentialing organizations (e.g., Commission on Dietetic Registration of the American Dietetic Association, Appraisal Qualifications Board). She has extensive experience in government settings and has conducted validation studies, developed licensing and certification examinations, and/or established cut scores for over 50 professions including commercial and residential appraisers, court reporters, predoctoral and postgraduate dentists, dental auxiliaries, specialty dietitians, structural engineers, engineering geologists, environmental site assessors, fiduciaries, hydrogeologists, pest control personnel, clinical psychologists, ship pilots, pharmacists, clinical psychologists, speech-language pathologists and veterinarians. She specializes in the development of multiple-choice, performance and oral examinations and has developed innovative methods to streamline procedures for job analyses and examination development.

She has chaired and presented at the annual meetings of the Council on Licensure, Enforcement and Regulation and the National Council on Measurement in Education and has also co-authored several technical papers and journal articles. She is a member of the American Psychological Association, the American Educational Research Association, the National Council on Measurement in Education, and the Council on Licensure, Enforcement and Regulation.

COMPREHENSIVE ORAL DIAGNOSIS AND TREATMENT PLANNING

I. Collect medical and dental history
   - A. Evaluate medical history, e.g., past illnesses, condition, family history, current illnesses and medications, medications and their effect on dental condition
   - B. Determine chief complaint
   - C. Obtain dental history, e.g., age of previous prostheses, existing restorations, prior history of orthodontic/periodontic treatment, oral hygiene habits/adjuncts
   - D. Determine psychosocial issues
   - E. Determine behavioral issues that affect relationship with patient

II. Perform comprehensive examination
   - A. Interpret radiographic series
   - B. Perform caries risk assessment
   - C. Determine periodontal condition
   - D. Perform head and neck examination
   - E. Screen for temporomandibular disorders
   - F. Assess vital signs
   - G. Perform clinical examination of dentition
   - H. Perform occlusal examination

III. Evaluate data to identify problems
   - A. List chief complaint
   - B. List medical problems
   - C. List stomatognathic problems
   - D. List psychosocial problems

IV. Work up problems and develop tentative treatment plan
   - A. Define each problem, e.g., severity/chronicity, classification
   - B. Determine if any additional diagnostic tests are needed
   - C. Develop differential diagnosis
   - D. Recognize need for referral(s)
   - E. Address pathophysiology of problem
   - F. Address short term needs
   - G. Address long term needs
   - H. Determine interactions of problems
   - I. Develop treatment options
   - J. Determine prognosis
   - K. Prepare patient information for informed consent

V. Develop final treatment plan
   - A. Establish rationale for treatment
   - B. Address all problems (any condition that puts the patient at risk in the long term)
   - C. Determine sequencing within the following framework

1. Systemic: medical issues of concern, medications and their effects, effect of diseases on oral condition, precautions, treatment modifications
2. Urgent: Acute pain/infection management, urgent esthetic issues, further exploration/additional information, oral medicine consultation, pathology
3. Preparatory: Preventive interventions, orthodontic, periodontal (Phase I, II), endodontic treatment, oral surgical treatment, TMD treatment, caries control, other temporization
4. Restorative: operative, fixed, removable prostheses, occlusal splints, implants,
5. Elective: Esthetic (veneers, etc.), any procedure that is not clinically necessity, replacement of sound restoration for esthetic purposes, bleaching
6. Maintenance: Periodontic recall, radiographic interval, periodic oral examination, caries risk management

VI. Prepare documentation according to risk management standards

DIRECT RESTORATIONS

I. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class II amalgam or composite

II. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class III or IV composite

III. Restore tooth containing primary carious lesions to optimal form, function and esthetics with Class V glass ionomer, composite or amalgam

IV. Select case based on minimum criteria for direct restorations

A. Class II – Any permanent posterior tooth
   1. Treatment needs to be performed in the sequence in the treatment plan
   2. More than one test procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments
   3. Caries as shown on either of the two required films on an unrestored proximal surface must extend to the dentoenamel junction
   4. Tooth to be treated must be in occlusion
   5. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the dentition adjacent to the proposed restoration must be either natural tooth structure or a permanent restoration; provisional restorations or removable partial dentures are not acceptable adjacent surfaces

6. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment
7. Tooth with bonded veneer is not acceptable
8. The lesion is not acceptable if it is in contact with circumferential decalcification

B. Class III/IV – Any permanent anterior tooth
1. Treatment needs to be performed in the sequence in the treatment plan
2. More than one test procedure can be performed on a single tooth. Teeth with multiple lesions may be restored at separate appointments.
3. Caries as shown on the required film on an unrestored proximal surface must extend to the dentoenamel junction
4. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the dentition adjacent to the proposed restoration must be either natural tooth structure or a permanent restoration; provisional restorations or removable partial dentures are not acceptable adjacent surfaces
5. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment
6. The lesion is not acceptable if it is in contact with circumferential decalcification
7. Approach must be appropriate for the tooth
8. Tooth with bonded veneer is not acceptable

C. Class V – Any permanent tooth
1. Tooth must have a carious lesion that is clinically evident.
2. Treatment needs to be performed in the sequence in the treatment plan
3. More than one test procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments
4. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment; the lesion is not acceptable if it is in contact with circumferential decalcification
5. New restoration must be separate from any existing restoration on the tooth

INDIRECT RESTORATIONS

I. Restore tooth to optimal form, function and esthetics with crown or onlay according to approved procedures and materials for indirect restorations.

A. Ceramic restoration must be onlay or more extensive

B. Partial gold restoration must be onlay or more extensive
C. Metal ceramic restoration
D. Full gold restoration
E. Facial veneer is not acceptable

II. Select case based on minimum criteria for indirect restorations.

A. Treatment needs to be performed in the sequence in the treatment plan.

B. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be in need of endodontic treatment. Endodontically treated teeth must follow standard of care.

C. Tooth must have opposing occlusion that is stable.

D. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the tooth adjacent to the planned restoration must be either an enamel surface or a permanent restoration; temporary restorations or removable partial dentures are not acceptable adjacent surfaces

E. Tooth must require an indirect restoration at least the size of the onlay or greater.

F. Cannot replace existing or temporary crowns

G. Buildups may be completed ahead of time, if needed. Teeth with cast posts are not allowed.

H. Restoration must be completed on the same tooth and same patient by the same student

I. Validated lab or fabrication error will allow a second delivery attempt starting from a new impression or modification of the existing crown.

J. Digital media cannot be used to capture impressions.

REMOVABLE PROSTHODONTICS

I. Develop diagnosis and determine treatment options and prognosis for removable prosthesis
A. Obtain patient history, e.g., medical, dental, psychosocial
B. Evaluate chief complaint
C. Obtain radiographs and photographs
D. Perform clinical examination, e.g., hard/soft tissue charting, endodontic evaluation, occlusal examination, skeletal/jaw relationship, VDO, CR, MIP

E. Evaluate existing prosthesis and patient concerns
F. Obtain and mount diagnostic cast
G. Determine complexity of case, e.g., ACP classification
H. Present treatment options and prognosis assessment, e.g., complete denture, partial denture, overdenture, implant options, FPD
I. Analyze risks/benefits
J. Apply critical thinking and make evidence-based treatment decisions x

II. Restore edentulous spaces with removable prostheses
A. Develop diagnosis and treatment plan for removable prosthesis
B. Obtain diagnostic casts
C. Perform diagnostic wax-up/survey framework design
D. Determine need for preprosthetic surgery and make necessary referral
E. Perform tooth modification and/or survey crowns
F. Obtain master impressions and casts
G. Obtain occlusal records
H. Try-in and evaluate trial dentures
I. Insert prosthesis
J. Provide post-insertion care
K. Apply standards of care, e.g., infection control, informed consent

III. Manage tooth loss transition with immediate or transitional prostheses
A. Develop diagnosis and treatment plan – tooth salvage/extraction decisions
B. Educate patient regarding healing process, denture experience, future treatment needs, etc
C. Plan surgical and prosthetic phases
D. Obtain casts, e.g., preliminary/final impressions
E. Obtain occlusal records
F. Perform diagnostic wax-up
G. Try-in and evaluate trial dentures
H. Manage and coordinate surgical phase
I. Insert immediate or transitional prosthesis
J. Provide post insertion care including adjustments, relines, patient counseling
K. Apply standards of care, e.g., infection control, informed consent

IV. Manage prosthetic problems
A. Assess real or perceived patient problems
B. Evaluate existing prosthesis
C. Perform uncomplicated repair, reline, re-base, re-set or re-do
D. Determine need for specialty referral
E. Obtain impression/record/information for laboratory use
F. Communicate needed prosthetic procedure to laboratory technician
G. Insert prosthesis and provide follow-up care
H. Perform in-office maintenance, e.g., prosthesis cleaning, clasp tightening, occlusal adjustment

V. Direct and evaluate laboratory services for prosthesis
A. Complete laboratory prescription
B. Communicate with laboratory technician

C. Evaluate laboratory work product, e.g., frameworks, processed dentures

ENDODONTICS

I. Apply case selection criteria for endodontic cases
   A. Meet AAE case criteria for minimum difficulty
      1. Treat simple morphologies of all teeth
      2. Treat teeth that include signs and symptoms of swelling and acute inflammation
      3. Treat teeth without previous complete or partial endodontic therapy
   B. Determine endodontic diagnosis
   C. Perform charting and diagnostic testing
   D. Take and interpret radiographs
   E. Determine pulpal diagnosis within approved parameters
      1. Within normal limits
      2. Reversible pulpitis
      3. Irreversible pulpitis
      4. Necrotic pulp
   F. Determine periapical diagnosis within approved parameters
      1. Within normal limits
      2. Asymptomatic apical periodontitis
      3. Symptomatic apical periodontitis
      4. Acute apical abscess
      5. Chronic apical abscess
   G. Develop endodontic treatment plans including referral, trauma, and management of emergencies

II. Demonstrate pretreatment preparation for endodontic treatment
   A. Manage pain control
   B. Remove caries and failed restorations
   C. Determine restorability
   D. Achieve isolation

III. Perform access opening
   A. Create indicated outline form
   B. Create straight line access
   C. Maintain structural integrity
   D. Complete unroofing of pulp chamber
   E. Identify all canal systems

IV. Perform shaping and cleaning techniques
   A. Maintain canal integrity
   B. Preserve canal shape and flow
   C. Apply protocols for establishing working length
   D. Manage apical control
   E. Apply disinfection protocols

V. Perform obturation techniques
   A. Apply obturation protocols
      1. Select and fit master cone

2. Determine canal conditions before obturation
3. Verify sealer consistency and adequacy of coating

B. Demonstrate length control of obturation
C. Achieve dense obturation of filling material
D. Demonstrate obturation to a clinically appropriate coronal height

VI. Demonstrate completion of endodontic case
A. Achieve coronal seal to prevent re-contamination
B. Create diagnostic, radiographic and narrative documentation

VII. Provide recommendations for post-endodontic treatment
A. Recommend final restoration alternatives
B. Provide recommendations for outcomes assessment and follow-up

PERIODONTICS

I. Perform comprehensive periodontal examination
C. Review medical and dental history
D. Interpret radiographs
E. Perform extra- and intra-oral examination
F. Perform comprehensive periodontal data collection
1. Evaluate plaque index, probing depths, bleeding on probing, suppuration, CEJ-GM, clinical attachment level and furcations
2. Perform occlusal assessment
G. Evaluate periodontal etiology/risk factors (local and systemic)

II. Determine diagnosis and develop periodontal treatment plan
A. Determine periodontal diagnosis
B. Formulate initial periodontal treatment plan
1. Determine whether to treat or refer to periodontist
2. Discuss with patient etiology, benefits of treatment, specific risk factors, alternatives and patient-specific oral hygiene instructions
3. Determine nonsurgical periodontal therapy including management of contributing factors of periodontitis
4. Determine need for re-evaluation
5. Determine recall interval (if no re-evaluation needed)

III. Perform nonsurgical periodontal therapy
A. Detect supra- and subgingival calculus
B. Perform periodontal instrumentation
1. Remove calculus
2. Remove plaque
3. Remove stains
C. Minimize tissue trauma
D. Provide effective anesthesia

IV. Perform periodontal re-evaluation
A. Evaluate effectiveness of oral hygiene care
B. Assess periodontal outcomes
1. Review medical and dental history
2. Review radiographs

3. Perform comprehensive periodontal data collection (e.g., evaluate plaque index, probing depths, bleeding on probing, suppuration, CEJ-GM, clinical attachment level, furcations, tooth mobility)

C. Discuss with patient etiology, benefits of treatment, alternatives, patient-specific oral hygiene instructions, and modification of specific risk factors

D. Determine further periodontal needs including need for referral to a periodontist and periodontal surgery

E. Establish recall interval for periodontal treatment

Rules of thumb for creating behaviorally anchored rating scales to ensure objectivity in measurement

- Descriptions should demonstrate clear distinctions between levels such that examiners can clearly conceptualize the differences between different levels of performance
- Avoid overlapping descriptions to ensure each performance level is distinct
- Whenever possible:
    - Use verbs to create action-based descriptions so that it is clear to an examiner what action is being performed rather than the lack of it. For example, if a candidate is lacking something, identify the behaviors that are actually occurring or the judgment could be reliably inferred.
    - Avoid use of qualifying words that could have various interpretations, e.g., appropriate, inappropriate, proper, improper
    - Avoid use of negative words "not" and describe the actual behavior performed

Purpose of competency examinations

The competency examinations for direct restoration are designed to restore tooth containing an interproximal primary carious lesions to optimal form, function and esthetics with Class II amalgam or composite; maximum one slot preparation, AND, restore tooth containing an interproximal primary carious lesions to optimal form, function and esthetics with Class III or IV composite; interproximal lesion on one interproximal surface in an anterior tooth that does not connect with a second interproximal lesion can be restored separately.

Proposed clinical experiences

The documentation of direct restorative clinical experiences shall include 60 cases. For purposes of this section a cases is defined as any restoration on a permanent or primary tooth using standard restorative materials. Restorations are further defined to include: amalgams, composites, crown build-ups, direct pulp caps and temporizations. Direct restorative cases may include any procedures that meet and comply with the criteria and standards established by the school for such clinical procedures.

Overview

- Case(s) to be performed without faculty intervention
- Critical errors are those that impact patient safety and prevent completion of the examination
- Each case will be performed start to finish on the same patient
- Schools have the option to use the same faculty to grade each case
- Must use calibrated designated faculty examiners. Schools designate faculty as examiners and are responsible for calibration.

- If a student fails a competency examination two times, they cannot take another one until they undergo remediation. School to determine clinical experience necessary prior to starting portfolio
- Assumes that scores of 5, 4, 3 are passing grades; scores of 2 and 1 are failing grades.

Requires case presentation

- Proposed treatment is appropriate for patient's medical and dental history
- Treatment consent obtained

Requires patient management

- Student is familiar with patient's medical and dental history
- Medical conditions are managed appropriately

Case selection criteria

- Complete two cases; minimum of one Class II.

A. Class II – Any permanent posterior tooth
   1. Treatment needs to be performed in the sequence described in the treatment plan
   2. More than one test procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments
   3. Caries as shown on either of the two required films on an unrestored proximal surface must extend to the dentoenamel junction
   4. Tooth to be treated must be in occlusion
   5. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the dentition adjacent to the proposed restoration must be either natural tooth structure or a permanent restoration; provisional restorations or removable partial dentures are not acceptable adjacent surfaces
   6. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment
   7. Tooth with bonded veneer is not acceptable
   8. The lesion is not acceptable if it is in contact with circumferential decalcification

B. Class III/IV – Any permanent anterior tooth.
   1. Treatment needs to be performed in the sequence described in the treatment plan
   2. More than one test procedure can be performed on a single tooth. Teeth with multiple lesions may be restored at separate appointments.
   3. Caries as shown on the required film on an unrestored proximal surface must extend to the dentoenamel junction
   4. Carious lesions must involve the interproximal contact area

5. Must have an adjacent tooth to be able to restore a proximal contact; proximal surface of the dentition adjacent to the proposed restoration must be either natural tooth structure or a permanent restoration; provisional restorations or removable partial dentures are not acceptable adjacent surfaces
6. Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment
7. The lesion is not acceptable if it is in contact with circumferential decalcification
8. Approach must be appropriate for the tooth
9. Tooth with bonded veneer is not acceptable

Scoring criteria

FACTOR 1: Case presentation

5	4	3	2	1
• Presents a comprehensive review of medical and dental history • Proposes method for provisionalization • Proposes initial design of restoration	• Provides justification for treatment based on significant factors in medical and dental history	• Provides clinically appropriate justification but lacks systematic relationship to medical and dental history • Appropriate planning and sequencing of treatment	• Misses critical factors in medical and dental history that affect treatment • Provides inappropriate justification for treatment • Sequencing of treatment does not follow standards of care	• Does not recognize necessity of premedication • Unable to justify treatment

FACTOR 2: OUTLINE AND EXTENSIONS

5	4	3	2	1
• Optimal outline and extensions ○ Smooth flowing ○ Does not weaken tooth ○ Includes the lesion ○ Breaks proximal contacts as appropriate ○ Appropriate cavosurface angles ○ Optimal treatment of fissures ○ No damage to adjacent teeth ○ Optimal extension for caries/ decalcification ○ Appropriate extension requests	• Slight deviation from optimal	• Moderate, clinically acceptable deviations from optimal	• Clinically unacceptable major deviations from optimal such as: ○ Irregular outline ○ Outline weakens the tooth ○ Does not include the lesion ○ Contacts not broken where appropriate ○ Proximal extensions excessive ○ Inappropriate cavosurface angle(s) ○ Inappropriate treatment of fissures ○ Adjacent tooth requires major recontouring ○ Inappropriate extension requests	• Multiple major or critical deviation(s) from optimal • Adjacent tooth requires restoration

FACTOR 3: INTERNAL FORM

5	4	3	2	1
• Optimal internal form ○ Optimal pulpal and axial depth ○ Optimal wall relationships ○ Optimal axio-pulpal line angles ○ Optimal internal refinement ○ All previous restorative material removed ○ Optimal caries removal ○ Preparation is clean and free of fluids and/or debris ○ Appropriate liners and bases ○ Appropriate extension requests	• Slight deviation from optimal	• Moderate, clinically acceptable deviations from optimal	• Clinically unacceptable major deviations from optimal such as: ○ Excessive or inadequate pulpal or axial depth ○ Inappropriate wall relationships ○ Inappropriate internal line angles ○ Rough or uneven internal features ○ Previous restorative material present ○ Inappropriate caries removal ○ Fluids and/or debris present ○ Inappropriate handling of liners and bases ○ Inappropriate extension requests	• Multiple major or critical deviation(s) from optimal • Iatrogenic pulp exposure

FACTOR 4: OPERATIVE ENVIRONMENT

5	4	3	2	1
• Optimal isolation ○ Adequate number of teeth isolated ○ Dam fully inverted ○ Clamp stable with no tissue damage ○ No leakage ○ Preparation can be accessed and visualized	• Slight deviation from optimal	• Moderate, clinically acceptable deviations from optimal	• Clinically unacceptable major deviations from optimal such as: ○ Inadequate number of teeth isolated ○ Dam not inverted, causing leakage that may compromise the final restoration ○ Clamp is not stable or impinges on tissue ○ Preparation cannot be accessed or visualized to allow proper placement of restoration	• Multiple major or critical deviation(s) from optimal

FACTOR 5: ANATOMICAL FORM

5	4	3	2	1
• Optimal anatomic form ○ Harmonious and consistent with adjacent tooth structure ○ Interproximal contour and shape are proper ○ Interproximal contact area and position are properly restored ○ Contact is closed ○ Height and shape of marginal ridge is appropriate	• Slight deviation from optimal	• Moderate, clinically acceptable deviations from optimal	• Clinically unacceptable major deviations from optimal such as: ○ Inconsistent with adjacent tooth structure ○ Interproximal contour and shape are inappropriate ○ Interproximal contact is open ○ Height and shape of marginal ridge is inappropriate	• Multiple major or critical deviation(s) from optimal

FACTOR 6: MARGINS

5	4	3	2	1
• Optimal margins ○ No deficiencies or excesses	• Slight deviation from optimal	• Moderate, clinically acceptable deviations from optimal	• Clinically unacceptable major deviations from optimal such as: ○ Open, submarginal, and/or excess restorative material	• Multiple major or critical deviation(s) from optimal

FACTOR 7: FINISH, FUNCTION AND DAMAGE

5	4	3	2	1
• Optimal finish and function ○ Smooth with no pits, voids or irregularities in restoration ○ Occlusion is properly restored with no interferences ○ No damage to hard or soft tissue	• Slight deviation from optimal	• Moderate, clinically acceptable deviations from optimal	• Clinically unacceptable major deviations from optimal such as: ○ Significant pits, voids or irregularities in the surfaces ○ Severe hyper-occlusion or hypo-occlusion ○ Damage to hard or soft tissue	• Multiple major or critical deviation(s) from optimal • Restoration is fractured • Did not finish within three hours

Rough Draft of the Portfolio Regulations

4/27/10 revisions

Section 1021 Dentist

The following fees are set for dentist licensure by the board:

(a) Initial application for the board portfolio examination pursuant to Section 1632 (c) (1) of the code, initial application for those applicants qualifying pursuant to Section 1632 (c) (2) and those applicants qualifying pursuant to Section 1643.1..... $100.00

(b) Board portfolio examination or re-examination pursuant to Section 1032 (c) (1) of the code..... .....*$350.00*

(c) Fee for application for licensure by credential..... .... $283.00

(d) Initial license.....$365.00*

(e) Biennial license renewal fee..... .$365.00

(f) Biennial license renewal fee for those qualifying pursuant to Section 1716.1 of the code shall be one half of the renewal fee prescribed by section *(e).*

(g) Delinquency fee – license renewal- The delinquency fee for license renewal shall be the amount prescribed by section 163.5 of the code.

(h) Substitute certificate.....$ 50.00

(i) Application f or additional office permit.....$100.00

(j) Biennial renewal of additional office permits.....$100.00

(k) Late change of practice registration.....$ 50.00

(l) Fictitious name permit. The fee prescribed by Section1724.5 of the code.

(m) Fictitious name renewal.....$150.00

(n) Delinquency fee-fictitious name renewal. The delinquency fee for fictitious name permit shall be one – half of the fictitious name permit renewal fee.

(o) Continuing educations registered provider fee.....$250.00

(p) General anesthesia or conscious sedation permit or adult or minor oral conscious sedation certificate.....$200.00

(q) Oral conscious sedation certificate renewal.....$ 75.00

(r) General anesthesia or conscious sedation permits renewal fee....$200.00

(s) General anesthesia or conscious sedation on-site inspections and evaluation fee.....$250.00

* Fee pro-rated based on applicant's birth date.

Note: Authority cited Sections 1614, 1635.5, 1724 and 1724.5, Business and Professions Code. Reference: Sections 1632, 1646.6 1647.8 1647.12,1647.15, 1715,1716.1, 1718.3, 1724 and 1724.5, Business and Professions code

History

1. Amendment filed 12-16-85; effective thirtieth day thereafter (Register 85, No.51)

2. Amendment filed 4-8-87; operative upon filing (Register 87, No. 15)

3. Amendment filed 4-1-91; operative 5-1-91 (Register 91, No18)

4. Amendment filed 8-2-91; operative 9-2-91 (Register 91, No.48)

5. Amendment filed 5-28-93 operative 6-28-93 (register 93, No.22

6. Editorial correction of subsections (c) and (p) (Register97, No. 24

7. Amendment of subsections (f) and (g) and amendment of footnote and note filed 2-23-98; operative 6-1-98 (register 98, No. 9)

8. Changed without regulatory effect amending subsections (f) and (g) filed 3-26-98 pursuant to section 100, title 1. California Code of Regulations (Register 98, No. 13)

9. Amendment of subsections (t) and (u) and amendment of Note filed 5-15-2000 as an emergency; operative 5-15-2000 (Register 2000, No. 20 A Certificate of Compliance must be transmitted to OAL by 9-12-2000 or emergency language will be repealed by operation of law on the following day.

10. Certificate of Compliance as to 5-15-2000 order, including further amendments transmitted to OAL 9-7-2000 and filed 10-18-2000 (Register 2000, No. 42)

11. Change without regulatory effect repealing subsections (q) and (r) and relettering subsection filed 12-19-2000 pursuant to section 100, title 1, California Code of Regulations (Register 2000, No. 51).

12. New subsections (f) and subsection relettering filed 7-17-2003; operative 8-16-2003 (Register 2003, No. 29)

13. Amendment o subsections (a) , (d) and (g)-(i) footnote and Note filled 3-13-2006 as an emergency ; operative 3-13-2006 (Register 2006, No.11) A certificate of Compliance must be transmitted to OAL by 7-11-2006 or emergency language will be repealed by operation of law on the following day.

14. Amendment of subsections (a), (d) and (g) –(i), footnote and Note refilled 7-12-2006 as an emergency operative 7-12-2006 (Register 2006, No 28) A Certificate of Compliance must be transmitted to OAL by 11-9-2006 or emergency language will be repealed by operation of law on the following day.

15. Reinstatement on 11-10-2006 of section as it existed prior to 3-13-2006 emergency amendment by operation of Government Code section 11346.1 (f) (Register 2006, No.46)

16. Amendment o subsections (a), (d) (g)-(i) footnote and Note refilled 11-15-2006 as an emergency; operative 11-15-2006 (Register 2006, No. 46) A Certificate of Compliance must be transmitted to OAL by 3-15-2007 or emergency language will be repealed by operations of law on the following day.

17. Certificate of Compliance as to 11-15-2006 order transmitted to OAL 1-5-2007 and filed 2-15-2007 (Register 2007, NO. 7)

18. Amendment to subsection (s) filed 12-13-2007; operative 12-13, 2007 pursuant to Government Code Section 11343.4 (Register 2007, No. 50)

19. Amendment of section heading, first paragraph, subsection (a) and note filed 2-1-2008 as an emergency; operative 2-1-2008 (Register 2008 No. 5) A certificate of Compliance must be transmitted to OAL by 7-30-2008 or emergency language will be repealed by operation of law on the following day.

20. Certificate of Compliance as to 2-1-2008 order transmitted to OAL 7-29-2008 and filed 9-10-2008 (Register 2008, No 37

Article 2

Application for Licensure

Section 1028. Application for Licensure.

(a) An applicant for licensure as a dentist shall submit an "Application for Licensure to Practice Dentistry" (WREB) or "Application for Licensure *by Portfolio Examination* which are forms prescribed by the board and the application shall be accompanied by the following information and fees.

(1) The application and examination (s) fees as set by Section 1021;

(2) Satisfactory evidence that the applicant has met all applicable requirements in section 1628 of the Code;

(3) Two classifiable sets of fingerprints or a Live Scan form and applicable fee;

(4) Where applicable, a record of any previous dental practice and verification of license status in each state or jurisdiction in which licensure as a dentist has been attained;

(5) Applicant's name, social security number , address of residency, mailing address I f different from address of residency, date of birth, and telephone number;

(6) A 2 inch by 2 inch passport style photograph of the applicant submitted with the "Application for Licensure to Practice Dentistry (WREB)"

(7) Information regarding applicant's education including dental education and postgraduate study;

(8) Information regarding whether the applicant has any pending or had in the past any charges filed against a dental license or other healing arts license;

(9) Information regarding any prior disciplinary action(s) taken against the applicant regarding any dental license or other healing arts license held by the applicant including actions by the United States Military, United States Public Health Service or other federal government entity. "Disciplinary action" includes, but is not limited to, suspension, revocation, probation, confidential discipline, consent order, letter of reprimand or warning or any other restriction or action taken against a dental license. If an applicant answers yes" he or she shall provide the date of the effective date of disciplinary action, the state where the discipline occurred, the date(s), charges convicted of, disposition and any other information required by the board;

(10) Information as to whether the applicant is currently the subject of any pending investigation by any governmental entity. If the applicant answers "yes" he or she shall provide any additional information requested by the board;

(11) Information regarding any instances in which the applicant was denied a dental license, denied permission to practice dentistry, or denied permission to take a dental board examination. If the applicant answers "yes" he or she shall provide the state or country where the denial took place, the date of the denial, the reason for denial, and any other information requested by the board;

(12) Information as to whether the applicant has ever surrendered a license to practice dentistry in another state or country. If the applicant answers "yes" additional information shall be provided including state or country of surrender, date of surrender, reason for surrender, and any other information requested by the board;

(13) Information as to whether the applicant has ever been convicted of any crime including infractions, misdemeanors and felonies unless the conviction was for an infraction with a fine of less than $300. "Conviction" for purposes of this subparagraph includes a plea of no contest and any conviction that has been set aside pursuant to Section 1203.4 of the Penal Code. Therefore, applicants shall disclose any convictions in which the applicant entered a plea of no contest any conviction that was subsequently set aside pursuant to Section 1203 of the Penal Code.

(14) Whether the applicant is in default on a United State Department of Health and Human Services education load pursuant to Sections 685 of the Code.

(15) Any other information the board is authorized to consider, when determining if an applicant meets all applicable requirements for examination and licensure; and

(16) A certification, under the penalty of perjury, by the applicant that the information on the application is true and correct;

(b) An application *for licensure by portfolio may be submitted prior to graduation,* if the application is accompanied by a certification from the school that the applicant is expected to graduate. *The Board shall not issue a license, until receipt of a certificate from the dean of the school attended by the applicant, certifying the date the applicant graduated.*

(c) In addition to complying with the applicable provisions contained in subsections (a) through (b) above, an applicant for licensure as a dentist upon passage of Western Regional Examining Board "WREB" examination shall also furnish evidence of having successfully passed, or after January 1, 2005 ~~the WREB examination.~~

Note: Authority cited: Sections 1614, Business and Professions Code. Reference Sections 1628 and 1628.5, Business and Professions Code.

Section 1028.2 Application for Determination of Licensure Eligibility Pursuant to Section 1634.1

(a) An applicant for licensure as a dentist pursuant to Section 1634.1 of the Code shall submit an "Application for Determination of Licensure Eligibility (Residency)" (Rev. 07/08) that is incorporated herein by reference and shall be accompanied by certification of graduation by the dean of a qualifying dental school attended by the applicant, a letter from WREB certifying that the applicant has not failed the WREB clinical exam within the last five years and the applicable fees as set by Section 1021.

(b) Following review, the board shall notify the applicant of the eligibility determination. Upon a finding that the applicant is eligible, the applicant shall file an Application for Issuance of License Number and Registration of Place of Practice, as set forth in Sections 1028.4

Note: Authority cited: Section 1614 and 1634.2(c), Business and Professions Code. Reference: Section 1634.1, Business and Professions Code.

History

1. New Section filed 2-1-2008 as an emergency; operative 2-1-2008 (Register 2008, No. 5). A Certificate of Compliance must be transmitted to OAL by 7-30-2008 or emergency language will be repealed by operation of law on the following day.

2. Certificate of Compliance as to 2-1-2008 order, including amendment of subsection (a), transmitted to OAL 7-29-2008 and filed 9-10-2008 (Register 2008, No 37).

Section 1028.3 Certification of Clinical Residency Program Completion Pursuant to Section 1634.2 (c).

An applicant for licensure as a dentist pursuant to Section 1634.1 of the code shall submit to the board a "Certification of Clinical Residency Completion" (Rev. 07/08) that is incorporated herein by reference, and shall be signed by the current director of the residency program.

Note: Authority Cited Sections 1614 and 1634.2 (c), Business and Professions Code. Reference: Sections 1634.1 and 1634.2, Business and Professions Code.

History

1. New sections filed 2-1-2008 as an emergency; operative 2-1-2008 (Register 2008, No. 5) A Certificate of Compliance must be transmitted to OAL by 7-30-2008 or emergency language will be repealed by operation of law on the following day.

2. Certificate of Compliance s to 2-1-2008 order, including amendment of section, transmitted to OAL 7-29-2008 and filed 9-10-2008 (Register 2008, No. 37)

Section 1028.4 Application for Issuance of License Number and Registration of Place of Practice Pursuant to Section 1650.

Upon being found eligible for licensure, the applicant shall file an "Application for Issuance of License Number and Registration of Place of Practice" (Rev. 11-07) that is incorporated herein by reference, and shall be accompanied by the licensure fee as set by section 1021

Note: Authority cited: Sections 1614 and 1634.2 (c), Business and Professions Code. Reference: Section 1650, Business and Professions Code

History

1. New section filed 2-1-2008 as an emergency; operative 2-1-2008 (Register 2008, No. 5) A certificate of Compliance must be transmitted to OAL by 7-30-2008 or emergency language will be repealed by operation of law on the following day.

2. Certificate of Compliance as to 2-1-2008 order, including amendment of section heading and section, transmitted to OAL 7-29-2008 and filed 9-10-2008 (Register 2008, No.37).

Sections 1028.5 Application for California Law and Ethics Examination Pursuant to Section 1632 (b)

Application for the California law and ethics examination shall be made on an "Application for Law and Ethics Examination" (Rev. 12/07) that is incorporated herein by reference.

Note: Authority cited: Sections 1614 and 1634.2(c), Business and Professions Code. Reference: Sections 1632, Business and Professions Code.

History

1. new sections filed 2-1-2008 as an emergency; operative 2-1-2008 (Register 2008, No. 5). A Certificate of Compliance must be transmitted to OAL by 7-30-2008 or emergency language will be repealed by operations of law on the following day.

2. Certificate of Compliance as to 2-1-2008 order, including amendment of section transmitted to OAL 7-29-2008 and filed 9-10-2008 (Register 2008, No 37).

Section1029. Approval of Application

Permission *to submit a portfolio for examination* shall be granted to those applicants who have paid the necessary fees and whose credentials have been approved by the executive officer.

Nothing contained herein shall be construed to limit the board's authority to seek from an applicant such other information as may be deemed necessary to evaluate the applicant's qualifications.

Note: Authority cited: Section 1614 Business and Professions Code. Reference Section 1628 and 1628.5, Business and Professions Code.

Section 1030 Theory Examination

An applicant shall successfully complete the National Board Dental Examination Part I and Part II prior to *submitting for assessment his/her Portfolio* and shall submit confirmation thereof to the board. Such confirmation must be *included in the portfolio submitted to the Board.*

Note Authority cited Section 1614 Business and Professions Code. Reference: Sections 1630, 1632 ~~and 1633.5.~~

ARTICLE 3

Examinations

Section 1031 Supplemental Examination in California Law and Ethics

Prior to issuance of a license, an applicant shall successfully complete supplemental written examinations in California Law and Ethics.

(a) The examination on California Law shall test the applicant's knowledge of California law as it relates to the practice of dentistry.

(b) The examination on ethics shall test the applicant's ability to recognize and apply ethical principles s as they relate to the practice of dentistry.

(c) An examinee shall be deemed to have passed the examinations if his/her score is at least 75% in each examination.

Note: Authority cited: Sections 1614 Business and Professions Code. Reference: Section 1630, 1632 and 1632.5, Business and Professions Code

***Section 1031.1** Definition*

For the purpose of the portfolio examination the following definitions shall apply:

(a) School means a dental school in California approved by the Board.

(b) Case means a dental procedure which satisfies the prescribed clinical experiences

(c) Assisting means the applicant is actually involved in the delivery of dental treatment, not just observing treatment.

(d) Portfolio means the cumulative documentation, submitted to the board, of the applicant's completion of the clinical experiences and demonstration of competency requirements for licensure under this division

(e) Dental school faculty portfolio examiner is faculty member who is chosen by the school, registered with the Board, and is trained and calibrated to conduct and grade the Board competency examinations.

Section 1031.2 Portfolio Examination

The Portfolio Examination is an alternative examination that each individual school may elect at any time to implement or decline to implement.

An applicant, with the approval of their clinical faculty, may participate in the board portfolio examination for each competency during their last year of dental education.

(a) Each portfolio shall contain the following:

(1) Documentation that provides proof of satisfactory completion of a final assessment in the competency domains prescribed by the board. For purpose of this section satisfactory proof means the portfolio has been approved by the designated dental school faculty.

(2) Satisfactory evidence the applicant has completed the clinical experiences prescribed by the board. For purpose of this section satisfactory evidence means documentation of completion of the prescribed clinical experiences in the competencies prescribed by the board.

(3) A letterform the dean or his/her designee stating the applicant has graduated o will graduate with no pending ethical issues.

(b) The following are the requirements for submission of a portfolio for initial licensure by the board.

(1) An applicant for initial licensure by portfolio examination shall submit a portfolio of his/her competency in domains prescribed by the board as evidence of the applicant's fitness to enter the practice of dentistry.

(2) The earliest date that a student may submit their portfolio for review by the Board shall be determined by each individual school. The application for licensure by portfolio shall be submitted no later than August 31 of the year of the applicant's graduation.

Section 1032 Demonstrations of *Clinical Experience*

Each applicant shall satisfactorily complete a*t least the minimum number of clinical experiences in the competencies listed below, prior to submission of their portfolio to the Board. Clinical experiences identified below have been determined as a minimum number in order to provide a student with sufficient understanding, knowledge and skill level to reliably demonstrate competency. All clinical experiences must be performed on patients under the supervision of dental school faculty and shall be included in the portfolio submitted to the board. Clinical experience may be obtained at the dental school clinic, any extramural dental facility or a mobile dental clinic approved by the Board.*

The portfolio shall contain documentation that the applicant has satisfactorily completed a minimum number of clinical experiences as described below:

(a) The documentation of oral diagnosis and treatment planning clinical experiences shall include 40 cases. For purposes of this section, case means any patient examination, oral diagnosis and treatment plan that is developed for the purpose of managing the treatment of some or all of the patient's dental needs. These examinations, diagnoses and treatment planning cases may include any procedures that meet and comply with the criteria and standards established by the school for such clinical procedures. These clinical procedures may include, but are not limited to, comprehensive oral evaluations, limited oral evaluations-problem focused, re-evaluation-limited, problem focused for an established patient, and comprehensive periodontal evaluation. Each examination, diagnosis and treatment planning clinical experience shall include evidence a medical and dental history were obtained, evidence of problem(s), work-up(s), development of alternative treatment plans when appropriate and the identification of a definitive treatment plan that was accepted by the school and presented to the patient..

(b) The documentation of periodontal clinical experiences shall include 25 cases. For purposes of this section, a periodontal case may include, but is not limited to an adult prophylaxis, treatment of periodontal disease such as scaling and root planing, any periodontal surgical procedure, assisting on a periodontal surgical procedure when performed by a faculty or an advanced dental education student in periodontics. Periodontal cases may include any procedures that meet and comply with the criteria and standards established by the dental school for such clinical procedures. The combined clinical periodontal experience must include a minimum of five (5) quadrants of scaling and root planing procedures.

(c)The documentation of direct restorative clinical experiences shall include 60 cases. For purposes of this section a cases is defined as any restoration on a permanent or primary tooth using standard restorative materials. Restorations are further defined to include: amalgams, composites, crown build-ups, direct pulp caps and temporizations. Direct restorative cases may include any procedures that meet and comply with the criteria and standards established by the school for such clinical procedures.

(d) The documentation of indirect restorative clinical experiences shall include 14 cases. For purposes of this section the cases may be a combination of the following procedures: inlays, onlays, crowns, abutments, pontics, veneers, cast posts, overdenture copings, or dental implants. Indirect restorative cases may include any procedures that meet and comply with the criteria and standards established by the school for such clinical procedures.

(e) The documentation of endodontic clinical experiences shall include five (5) cases. For purposes of this section a case means endodontic treatment of a single canal. Endodontic treatment of a tooth with three canals would count as three cases. Endodontic cases may include any procedures that meet and comply with the criteria and standards established by the dental school for such clinical procedures.

(f)The documentations of removal prosthetic clinical experiences shall include five (5) cases For purposes of this section a case is defined to include any of the following: full denture, partial denture (cast framework) partial denture (acrylic with a minimum number of posterior teeth), immediate treatment denture or dental implants. A removal prosthetic case may include any procedures that meet and comply with the criteria and standards established by the school for such clinical procedures.

(g)The documentation of oral maxillofacial surgery clinical experiences shall include 25cases. For purpose of this section a case is defined to include simple and surgical extractions, the removal of impacted teeth and other dentoalveolar surgical cases or surgical assists . A case may include any procedures that meet and comply with the criteria and standards established by the school for such clinical procedures.

Note: Authority cited 1614, Business and Professions Code. Reference Section 1632 and 1632.1

Note Authority cited: Section 1614 Business and Professions Code. Reference: Sections 1632 Business and Professions Code.

History:

1. Renumbering of former section 1033 to new section 1032.1 filed2-13-98; operative 3-15-98 (Register 98, No. 7)

2. Repealer of former sections 1032.1 and renumbering and amendment of former section 1032.3 to sections 1032.1 filed 8-25-99 operative 9-24-99 (Register 99, No. 35)

Note: Authority cited Section 1614 Business and Professions Code. Reference Sections 1632 and 1632.1 Business and Professions Code.

History:

1. Renumbering and amendment of former section 1034 to new section 1032.2 (filed 2-13-98; operative 3-15-98 (Register 98, no. 7)

2. Repealer of former section 1032.2 and renumbering and amendment of former section 1032.6 to section 1032.3 (filed 8-25-99; operative 9-24-99(Register 99, No. 35)

Note Authority cited Section 1614 Business and Professions Code. Reference Sections 1632 and 1632.1 Business and Professions Code.

History:

1. Renumbering and amendment of former section 1035.1 to new sections 1032.4 filed 2-13-98 operative 3-15-98 (Register 98, No. 7).

2. Renumbering of former section 1032.4 to sections 1032.3 filed 8-25-99; operative 9-24-99 (Register 99, No. 35).

3. Editorial corrections of subsection (a) (Register 99, No. 42).

4. Amendment of subsections (a) filed 10-12-99; operative 11-11-99 (Register 99, No. 43).

Note Authority cited: Section 1614, Business and Professions Code. Reference: Section 1630 and 1632 Business and Professions Code.

History:

1. New sections filed 2-13-98; operative 3-15-98 (Register 98, No. 7)

2. Renumbering of former sections 1032.4 to sections 1032.3 and renumbering of former sections 10352.5 to sections 1032.4, including amendment of section heading and section filed 8-25-99; operative 9-24-99 (Register 99, No. 35)

Note: Authority cited Section 1614 Business and Professions Code. Reference Sections 1630 and 1632 Business and Professions Code.

History:

1. Renumbering and amendment of former sections 1035.2 to new sections 1032.5 filed 2-13-98, operative 3-15-98 (Register 98, No.7).

2. Amendment of subsection (b) filed 12-1-98 operative 12-31-98 (Roister 98, No. 49)

3. Renumbering of former section 1032.5 to section1032.4 and new sections 1032.5 filed 8-25-99, operative 9-24-99 (Register 99, No. 35).

~~Section 1032.6 Removable Prosthodontic Evaluation Examination~~

Note: Authority cited: Sections 1614 Business and Professions Code. Reference sections 1632 Business and Professions Code.

History:

1. New sections field 2-13-98, operative 3-15-98 (Register 98, No. 7

2. Renumbering of former sections 1032.6 to sections 1032.2 filed 8-25-98, operative 9-24-98 (Register 98, No 35)

Note Authority cited Section 1614 Business and Professions Code. Reference Sections 1630 and 1632 Business and Professions Code.

History:

1. Amendment filed 10-15-85 effective thirtieth day thereafter (Register 85, No.42).

2. Renumbering of former section 1033 to new section 1032.1 and mew section

(c) filed 8-25-99 operative 9-24-99 (Register 99, No 35).

Note: Authority cited Section 1614 Business and Professions Code. Reference Sections 1630 and 1632 Business and Professions Code.

History

1. Renumbering and amendment of former section 1035 to new section 1033.1 including repealer and new section heading, filed 2-13-13-98; operative 3-15-98 (Register 98, no. 7

2. Amendment of subsection (b) filed 3-26-99 operative 3-26-99 pursuant to Government Code section 11343.4 (d) (Register 99, no.13)

3. Amendment of (a) and (g) filed 8-25-99 operative 9-24-99 (registered 00, no.35)

Section 1033 *Competency Examination*

The applicant shall submit with the portfolio documentation of successful completion of the competency examinations. Each competency examination shall be graded in accordance with the Board's grading criteria on forms prescribed by

the board. The portfolio examination shall be signed by the school faculty portfolio examiner for the prescribed competency.

***Section 1033.1** Comprehensive Oral Diagnosis and Treatment Planning*

The oral diagnosis and treatment planning portfolio section shall contain documentation that the applicant has satisfactorily completed a final assessment of his/her competency. The documentation shall be on a form prescribed by the board and signed by the appropriate faculty. The oral diagnosis and treatment planning portfolio may include, but is not limited to the following:

(a) Medical history for dental treatment provided to patients. The medical history shall include: an evaluations of past illnesses and conditions, hospitalizations and operations, allergies, family history, social history, current illnesses and medications, and their effect on dental condition.

(b) Dental history for dental treatment provided to clinical patients. The dental history shall include: age of previous prostheses, existing restorations, prior history of orthodontic/periodontic treatment, and oral hygiene habits/adjuncts.

(c) Documentation the applicant performed a comprehensive examination for all dental treatment provided to patients which included:

(1) interpretation of radiographic series

(2) performance of caries risk assessment.

(3) determination of periodontal condition

(4) performance of a head and neck examination

(5) screening for temporomandibular disorders

(6) Assessment of vital signs

(7) performance of a clinical examination of dentition

(8) performance of an occlusal examination

(d) Documentation the applicant evaluated data to identify problems. The documentation of the data evaluation shall:

(1) list chief complaint

(2) list medical problem

(3) list stomatognathic problems

(4) list psychosocial problems.

(e)Documentation the applicant worked-up the problems and developed a tentative treatment plan. The documentation of the work-up and tentative treatment plan shall:

(1) define the problem (s) (e.g. severity/chronicity and classification)

(2) determine if additional diagnostic test are needed

(3) develop differential diagnosis

(4) recognize need for referral(s)

(5) address pathophysiology of the problem

(6) address short term needs

(7) address long term needs

(8 determine interaction of problems

(9) develop treatment options

(10) determined prognosis

(11) prepare patient information for informed consent

(f) Documentation the applicant developed a final treatment plan. The documentation shall:

(1) establish a rational for treatment.

(2) address all problems (any condition that puts the patient at risk in the long term.

(3) determine sequencing with the following framework:

(A) Systemic: medical issues of concern, medications and their effects, effect of diseases on oral condition, precautions, treatment modifications

(B) Urgent: Acute pain/infection management, urgent esthetic issues, further exploration/additional information, oral medicine consultation, pathology

(C) Preparatory: Preventive interventions, orthodontic, periodontal (Phase I, II), endodontic treatment, caries control, other temporization

(D) Restorative: operative, fixed, removable prostheses, occlusal splints, implants

(E) Elective: esthetic (veneers, etc.) any procedure that is not clinically necessary, replacement of sound restoration for esthetic purposes, bleaching

(F) Maintenance: periodontic recall, radiographic interval, periodic oral examination, caries risk management

(g) All oral diagnosis and treatment planning documentation shall be done according to the risk management standards.

***Section 1033.2** Direct Restoration*

The direct restoration portfolio section shall contain documentation that the applicant has satisfactorily completed a final assessment of his/her competency. The documentation shall be on a form prescribed by the board and signed by the designated dental school faculty. The documentation of the applicant's competency may include, but is not limited to the following:

(a) Documentation of the applicant's competency to perform a class II direct restoration on a tooth containing primary carious lesions to optimal form, function and esthetics using amalgam or composite restorative materials. The case

selection shall be based on minimum direct restoration criteria for any permanent posterior tooth. The treatment performed should follow the sequence of the treatment plan(s). More than one procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments. Each procedure may be considered a case. The tooth being restored must have caries that are evident on either of the two required radiographs. The tooth involved in the restoration must have caries which penetrate the dento-enamel junction and must be in occlusion. Proximal caries must be in contact with at least one adjacent tooth, a natural tooth surface or a permanent restoration; provisional restorations or removal partial dentures are not acceptable adjacent surfaces. The tooth must be asymptomatic with no pulpal or periapical pathosis and cannot be endodontically treated or in need of endodontic treatment.

(b) Documentation of the applicant's competency to perform a class III/IV direct restoration on a tooth containing primary carious lesions to optimal forms, function and esthetics using composite restorative material. The case selected shall be on any permanent anterior tooth and treatment needs to be performed in the sequence described in the treatment plan. More than one procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments. Each procedure may be considered a case. The tooth being restored must have caries that are evident on either of the two required radiographs. The tooth involved in the restoration must have caries which penetrate the dento-enamel junction.. The tooth to be restored must have an adjacent tooth to be able to restore a proximal contact. Proximal surface of the dentition adjacent to the proposed restoration must be natural tooth structure or a permanent restoration, provisional restorations or removable partial dentures are not acceptable adjacent surfaces. The tooth involved in the restoration must be asymptomatic with no pulpal or periapical pathosis and cannot be endodontically treated or in need of endodontic treatment. The lesion is not acceptable if it is in contact with circumferential decalcification. The approach must be appropriate for the tooth. Teeth with bonded veneers are not acceptable.

(c) Documentation of the applicants competency to perform a class V direct restoration on a tooth containing primary carious lesions to optimal forms, function and esthetics using glass ionomer, composite or amalgam restorative

materials. The class V restoration may be on any permanent tooth. The tooth selected must have clinically evident carious lesions and the treatment must be performed in the sequence described in the treatment plan. More than one procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments. Each procedure may be a considered a case. The tooth involve in the restoration must be asymptomatic with no pulpal or periapical pathosis and cannot be endodontically treated or in need of endodontic treatment. The lesion is not acceptable if it is in contact with circumferential decalcification. New restorations must be separate from any existing restoration on the tooth.

***Section 1033.3** Indirect Restorations*

The Indirect restoration portfolio section shall contain documentation that the applicant has satisfactorily completed a final assessment of his/her competency Documentation of the applicant's competency to restore a tooth to optimal form, function and esthetics with a crown or onlay according to approved procedures and materials for indirect restorations.

The documentation shall be on a form prescribed by the board and signed by the designated dental school faculty. The documentation of the applicant's competency shall include one of the following:

(a) Documentation of the applicant's competency to complete a ceramic onlay or more extensive indirect restorations. The treatment needs to be performed in the sequence in the treatment plan. The tooth must be asymptomatic with no pulpal or periapical pathosis and cannot be in need of endodontic treatment. The tooth selected for restoration, must have opposing occlusion that is stable. The tooth selected for restoration must have an adjacent tooth to be able to restore a proximal contact. The proximal surface of the tooth adjacent to the planned restoration must be either an enamel surface or a permanent restoration. Temporary restorations or removable partial dentures are not acceptable adjacent surfaces. The tooth selected must require an indirect restoration at least the size of the onlay or greater. The tooth selected cannot replace existing or temporary

crowns. Buildups may be completed ahead of time, if needed. Teeth with cast post are not allowed. The restoration must be completed on the same tooth and same patient by the same student. Digital media cannot be used to capture impressions.

(b) Documentation of the applicant's competency to complete a partial gold restoration must be an onlay or more extensive indirect restoration. The treatment must be performed in the sequence of the treatment plan. The tooth must be asymptomatic with no pulpal or periapical pathosis; cannot be in need of endodontic treatment. The tooth selected for restoration must have opposing occlusion that is stable. The tooth selected for restoration must have an adjacent tooth to be able to restore a proximal contact. The proximal surface of the tooth adjacent to the planned restoration must be either an enamel surface or a permanent restoration. Temporary restorations or removable partial dentures are not acceptable adjacent surfaces. The tooth selected must require an indirect restoration at least the size of the only or greater. The tooth selected cannot replace existing or temporary crowns. Buildups may be completed ahead of time, if needed. Teeth with cast post are not allowed. The restoration must be completed on the same tooth and same patient by the same student. Digital media cannot be used to capture impressions.

(c) Documentation of the applicant's competency to perform a full gold restoration. The treatment must be performed in the sequence of the treatment plan. The tooth must be asymptomatic with no pulpal or periapical pathosis; cannot be in need of endodontic treatment. The tooth selected for restoration must have opposing occlusion that is stable. The tooth selected for restoration must have an adjacent tooth to be able to restore a proximal contact. The proximal surface of the tooth adjacent to the planned restoration must be either an enamel surface or a permanent restoration. Temporary restorations or removable partial dentures are not acceptable adjacent surfaces. The tooth selected must require an indirect restoration at least the size of the onlay or greater. The tooth selected cannot replace existing or temporary crowns. Buildups may be completed ahead of time, if needed. Teeth with cast post are not allowed. The restoration must be completed on the same tooth and same patient by the same student. Digital media cannot be used to capture impressions.

(d) Documentation of the applicant's competency to perform a metal-ceramic restoration. The treatment must be performed in the sequence of the treatment plan. The tooth must be asymptomatic with no pupal or periapical pathosis; cannot be in need of endodontic treatment. The tooth selected for restoration must have opposing occlusion that is stable. The tooth selected for restoration must have an adjacent tooth to be able to restore a proximal contact. The proximal surface of the tooth adjacent to the planned restorations must be either an enamel surface or a permanent restoration. Temporary restorations or removable partial dentures are not acceptable adjacent surfaces. The tooth selected must require an indirect restoration at least the size of the onlay or greater. The tooth selected cannot replace existing or temporary crowns. Buildups may be completed ahead of time, if needed. Teeth with cast post are not allowed. The restoration must be completed on the same tooth and same patient by the same student. Digital media cannot be used to capture impressions

(e) A facial veneer is not acceptable documentation of the applicant's competency to perform indirect restorations.

***Section1033.4** Removable Prosthodontics*

The Removable Prosthodontic portfolio section shall contain documentation that the applicant has satisfactorily completed a final assessment of his/her competency. The documentation shall be on a form prescribed by the board and signed by the designated dental school faculty. The documentation of the applicant's competency may include, but is not limited to the following:

(a) Documentation the applicant developed a diagnosis, determined treatment options and prognosis for the patient to receive a removable prosthesis. The documentation may include, but is not limited to the following:

(1) Evidence the applicant obtained a patient history, (e.g. medical, dental and psychosocial).

(2) Evaluation of the patient's chief complaint

(3) Radiographs and photographs of the patient.

(4) Evidence the applicant performed a clinical examination. (e.g. hard/soft tissue charting, endodontic evaluation, occlusal examination, skeletal/jaw relationship, VDO, DR, MIP).

(4) Evaluation of existing prosthesis and the patient's concerns

(5) Evidence the applicant obtained and mounted a diagnostic cast.

(6) Evidence the applicant determined the complexity of the case based on ACP classifications.

(7) Evidence the patient was presented with treatment plan options and assessment of the prognosis. (e.g. complete dentures, partial denture, overdenture, implant options, FPD).

(8) Evidence the applicant analyzed the patient risks/benefits for the various treatment options.

(9) Evidence the applicant exercised critical thinking and made evidence –based treatment decisions.

(b) Documentation of the applicant's competency to successfully restore edentulous spaces with removable prosthesis. The documentations may include but is not limited to the following:

(1) Evidence the applicant developed a diagnosis and treatment plan for the removable prosthesis.

(2) Evidence the applicant obtained diagnostic casts.

(3) Evidence the applicant performed diagnostic wax-up/survey framework designs.

(4) Evidence the applicant performed an assessment to determine the need for pre-prosthetic surgery and made the necessary referral.

(5) Evidence the applicant performed tooth modifications and /survey crowns.

(6) Evidence the applicant obtained master impressions and casts.

(7) Evidence the applicant obtained occlusal records

(8) Evidence the applicant performed a try-in and evaluated the trail dentures.

(9) Evidence the applicant inserted the prosthesis and provided the patient with post-insertion care.

(10 Documentation the applicant followed established standards of care in the restoration of the edentulous spaces. (e. g. informed consent, and infection control).

(c) Documentation of the applicant's competency to manage tooth loss transitions with immediate or transitional prostheses. The documentation may include, but is limited to the following:

(1) Evidence the applicant developed a diagnosis and treatment plan that identified teeth that could be salvaged and or teeth that needed extraction.

(2) Evidence the applicant educated the patient regarding the healing process, denture experience, and future treatment need.

(3) Evidence the applicant developed prosthetic phases which included surgical plans.

(4) Evidence the applicant obtained casts (preliminary and final impressions)

(5) Evidence the applicant obtained the occlusal records.

(6) Evidence the applicant did try-ins and evaluated trail dentures.

(7) Evidence the applicant competently managed and coordinated the surgical phase.

(8) Evidence the applicant provided the patient post insertion care including adjustment, relines and patient counseling.

(9) Documentation the applicant followed established standards of care in the restoration of the edentulous spaces. (e. g. informed consent, and infection control)

(d) Documentation of the applicant's competency to manage prosthetic problems. The documentation may include, but is not limited to the following:

(1) Evidence the applicant competently managed real or perceived patient problems.

(2) Evidence the applicant evaluated existing prosthesis

(3) Evidence the applicant performed uncomplicated repairs, relines, re-base, re-set or re-do, if needed.

(4) Evidence the applicant made a determination if specialty referral was necessary.

(5) Evidence the applicant obtained impressions/records/information for laboratory use.

(6) Evidence the applicant competently communicated needed prosthetic procedure to laboratory technician.

(7) Evidence the applicant inserted the prosthesis and provided the patient follow-up care.

(8) Evidence the applicant performed in-office maintenance, (e.g. prosthesis cleaning, clasp tightening and occlusal adjustments).

(e) Documentation the applicant directed and evaluated the laboratory services for the prosthesis. The documentation may include, but is not limited to the following:

(1) Complete laboratory prescriptions sent to the dental technician

(2) Copies of all communications with the laboratory technicians

(3) Evaluations of the laboratory work product, (e.g. frameworks, processed dentures).

***Section 1033.5** Endodontics*

The endodontic portfolio section shall contain documentation that the applicant has satisfactorily completed a final assessment of his/her competency. The documentation shall be on a form prescribed by the board and signed by the designated dental school faculty. The documentation of the applicant's competency may include, but is not limited to the following:

(a) Documentation the applicant applied case selection criteria for endodontic cases.

(1) The portfolio shall contain evidence the cases selected met American Association of Endodontics case criteria for minimum difficulty.

(A)The applicant treated teeth with uncomplicated morphologies.

(B) The applicant treated teeth that may have included signs and symptoms of swelling and acute inflammation.

(C)The applicant treated teeth without previous complete or partial endodontic therapy.

(2) The applicant determined a diagnostic need for endodontic therapy.

(3) The applicant performed charting and diagnostic testing

(4) The applicant took and interpreted radiographs of the patient oral condition.

(5) The applicant made a pulpal diagnosis within approved parameters. Evidence the applicant considered the following in his/her determination the pulpal diagnosis was within approved parameters:

(A) Within normal limits

(B) Reversible pulpitis

(C) Irreversible pulpitis

(D) Necrotic pulp

(6) The applicant made a periapical diagnosis within approved parameters. Evidence the applicant considered the following in his/her determination the periapical diagnosis was within approved parameters:

(A) Within normal limits

(B) Asymptomatic apical periodontitis

(C) Symptomatic apical periodontitis

(D) Acute apical abscess

(E) Chronic apical abscess

(7) Evidence the applicant developed an endodontic treatment plan that included trauma treatment, management of emergencies and referrals when indicated.

(b) Documentation the applicant performed pretreatment preparation for endodontic treatment. Documentations may include but is not limited to the following:

(1) Evidence the applicant competently managed the patient's pain.

(2) Evidence the applicant removed caries and failed restorations

(3) Evidence the applicant determined the tooth restorability

(4) Evidence) the applicant achieved isolation.

(c) The applicant competently performed access opening. Documentation may include, but is not limited to the following:

(1) Evidence the applicant created the indicated outline form

(2) Evidence the applicant created straight line access

(3) Evidence the applicant maintained structural integrity.

(4) Evidence the applicant completed un-roofing of pulp chamber

(5) Evidence the applicant identified all canal systems

(d) Documentation the applicant performed shaping and cleaning techniques. Documentation may include, but is not limited to the following:

(1) Evidence the applicant maintained canal integrity

(2) Evidence the applicant preserved canal shape and flow.

(3) Evidence the applicant applied protocols for establishing working length

(4) Evidence the applicant managed apical control

(5) Evidence the applicant applied disinfection protocols.

(e) Documentations the applicant performed obturation protocols. Documentation may include, but is not limited to the following:

(1) Evidence the applicant applied obturation protocols

(A) Evidence the applicant selected and fit master cone

(B) Evidence the applicant determined canal condition before obturation

(C) Evidence the applicant verified sealer consistency and adequacy of coating

(2)Documentation the applicant demonstrated length control of obturation

(3) Documentation the applicant achieved dense obturation of filling material

(4) Documentation the applicant demonstrated obturation to a clinically appropriate coronal height

(f) Documentation the Applicant competently completed the endodontic case.

(1) Evidence the applicant achieved coronal seal to prevent re-contamination

(2) Evidence the applicant created diagnostic, radiographic and narrative documentation.

(g) Documentation the applicant provided recommendations for post-endodontic treatment

(1) Evidence the applicant recommended final restoration alternatives

(2) Evidence the applicant provided the patient with recommendations for outcome assessment and follow-up.

***Section 1033.6** Periodontics*

The periodontic portfolio section shall contain documentation that the applicant has satisfactorily completed a final assessment of his/her competency. The documentation shall be on a form prescribed by the board and signed by the designated dental school faculty. The documentation of the applicant's competency may include, but is not limited to the following:

(a) Documentation the applicant performed a comprehensive periodontal examination. The comprehensive periodontal examination may include, but is not limited to the following:

(1) Evidence the applicant reviewed the patient's medical and dental history.

(2) Evidence the applicant evaluated the patient's radiographs

(3) Evidence the applicant performed extra- and intra-oral examinations of the patient.

(4) Evidence the applicant performed comprehensive periodontal data collection

(A) Evidence the applicant evaluated the patient's plaque index, probing depths, bleeding on probing, suppurations, CEJ-GM, clinical attachment level tooth mobility and furcations

(B) Evidence the applicant performed an occlusal assessment

(b) Documentation the applicant diagnosed and developed a periodontal treatment plan that documents the following:

(1) The applicant determined the periodontal diagnosis

(2) The applicant formulated an initial periodontal treatment plan that the applicant:

(A) Determined to treat or refer the patient

(B) Discussed with patient the etiology, periodontal disease, benefits of treatment, consequences of no treatment, specific risk factors, and patient-specific oral hygiene instructions.

(C) Determined non surgical periodontal therapy.

(D) Determined need for re-evaluation

(E) Determined recall interval

(c)Documentation the applicant performed nonsurgical periodontal therapy that he/she:

(1) detected supra- and subgingival calculus

(2) performed periodontal instrumentation:

(A) Removed calculus

(B) Removed Plaque

(C) Removed stains

(3) Demonstrated that the applicant did not inflict excessive soft tissue trauma

(4)Demonstrated that the applicant provided the patient with anesthesia

(d) Documentation the applicant performed periodontal re-evaluation

(1) Evidence the applicant evaluated effectiveness of oral hygiene

(2) Evidence the applicant assessed periodontal outcomes:

(A) Reviewed the medical and dental history

(B) Reviewed the patient's radiographs

(C) Performance of comprehensive periodontal data collections (e. g. , evaluation of plaque index, probing depths, bleeding on probing,

suppurations, CEJ-GM, clinical attachment level, furcations, and tooth mobility

(5) Evidence the applicant discussed with the patient his/her periodontal status as compared to the baseline, patient-specific oral hygiene instructions and modifications of specific risk factors

(6) Evidence the applicant determined further periodontal needs including need for referral to a Periodontist and periodontal surgery.

(7) Evidence the applicant established a recall interval for periodontal treatment.

Section 1034 *Portfolio Final Review*

(a) The *board* shall *be responsible for review of the submitted portfolio to determine that it is complete and that the applicant has met the requirements for licensure by portfolio examination. The executive officer shall* indicate on the records the names of those applicants who have *satisfactorily* passed *their competency assessments and have completed portfolios approved by the board* and shall *issue an initial license to enter dental practice*

Note: Authority cited: section 1614 Business and Professions Code. Reference Section 1614,1615,1632,1633 and 1634 Business and Professions Code.

History

1. Renumbering of former section 1034 to new section 1032.2 and renumbering and amendment of former section 1037 to new section 1034 filed 2-13-98; operative 3-15-98 Register 98.no.7

2. New section (d) and subsection re-lettering filed 5-27-98 operative

3. Amendment of subsections (b) (1) –(c), repealer of subsection (d) and subsection reentering filed 8-25-98 operative 9-24-99 Register 99 No.35

4. Amendment of section heading, new introductory paragraph, amendment of subsection (d) and amendment of note filed 3-13-2006 as an emergency operative 3-13-2006 (Register 2006 No. 11 A. certificate of compliance must be transmitted to OAL by 7-11-2006 or emergency language will be repealed by operation of law on the following day.

(5) Amendment of sections heading, new introductory paragraph amendment of subsection (d) and amendment of note refilled 7-12-2006 as an emergency ; operative 7-12-2006 (Register 2006 No. 28) A Certificate of Compliance must be transmitted to OAL by 11-9-2006 or emergency language will be repealed by operations of law on the following day.

6. Reinstatement on 11-10-2006 of section as it existed prior to 3-13-2006 emergency amendment by operation of Government code section 113146.1 (f) (Register 2006 No 46.)

7. Amendment of section heading, new introductory paragraph, amendment of subsection (d) and amendment of note refilled 11-15-2006 as an emergency; operative 11-15-2006 (Register 2006 No 46) A certificate of Compliance must be transmitted to OAL by 3-15-2007 or emergency language will be repealed by operation of law on the following day.

8. Certificate of Compliance as to 11-15-2006 order transmitted to OAL 1-5-2007 and filed 2-15-2007 (Register 2007, No. 7).

Section 1035 *Portfolio Examiner*

The following are the requirements to be appointed as a dental school faculty portfolio examiner:

(a) Each school shall submit to the board, at the beginning of the school year the names, credentials and qualifications of the dental school faculty appointed to conduct the portfolio examination. Documentation of qualifications shall include but is not limited to, evidence the dental school faculty examiner selected satisfies the dental school criteria and standards established by his/her school to conduct competency examinations. The school faculty examiner must have documented experience in conducting examinations in an objective manner. In addition to the

names, credentials and qualifications the board approved school shall submit documentation the appointed dental school faculty examiners have been trained and calibrated in compliance with the Board's requirements. Changes to the school faculty examiners shall be reported to the Board. The school must provide the Board an annual updated list of their faculty examiners.

(b) The Board reserves the right to approve or disapprove dental school faculty portfolio examiners

***Section 1035.1** Portfolio Examiner Standardization and Calibration*

Each school faculty portfolio examiner shall be trained as described below:

(a) School faculty examiners shall be trained to use a standardized evaluation system through didactic and experiential methods. Calibration of the school faculty examiners shall be conducted at least annually in conjunction with the usual and customary calibration course given to the school's competency examiners.

(b) School faculty examiners will receive hands-on training with feedback on their performance and how their scoring varies from their fellow examiner. This process is intended to enhance the examiner inter-rater reliability. An examiner whose error rate exceeds a prescribed level will be re-calibrated. If any examiner is unable to be re-calibrated, the Board may dismiss the examiner from the portfolio process.

(c) School faculty examiner training activities will include multiple examples of performance that clearly relate to the specific judgments that examiners are expected to provide during the competency examinations.

(d) Hands- on training sessions will include, but are not limited to, an overview of the rating process, examples of rating errors, examples of how to complete the grading forms, several sample cases in each of the competency domains, and ongoing feedback to individual examiners

(e)All school faculty examiners will be trained and calibrated to use the same rating criteria

(f) Training sessions will be conducted on an ongoing basis, with the expectations that examiners participating in the portfolio examination process will have opportunity to participate in competency examinations conducted at schools other than their own.

Note: Authority cited: Section 1614 Business and Professions code

History:

1. Admen dent of subsections (f) filed 4-27-87; operative 4-27-87 (Register 87, No. 18

2. Repealer of subsection (f) – (f) (2) and (h) and subsection reentering filed 7-12-95; operative 8-11-95 (Register 95, No. 28)

3 Renumbering and amendment of former section 135 to new section 1033.1and renumbering of former section 1038 to new section 1035 filed 2-13-98, operative 3-15-98 (Register98, No7)

Section 1036 Remedial Education

An applicant who fails to pass *a competency e*xamination after *two* attempts shall not be eligible for further re-examination until the applicant has successfully completed *remedial* education *in that competency*.

(a) The *remedial* course work *content* shall be *determined by his or her school and may include didactic, laboratory or clinical patients to satisfy the board requirement for remediation before an additional portfolio competency examination may be taken*.

(b) When an applicant applies for re-examination he or she shall furnish evidence of successful completion of the remedial education requirements for re-examination. *The remediation form must be signed and presented prior to re-examination.*

Note: Authority cited: Section 1614, Business and Professions Code. Reference Section 1632.5 Business and Professions Code.

History

1. Renumbering of former subsection (a) to Sections 1036.2 filed 10-15-85 effective thirtieth day thereafter (Register 85, No.42)

2. Repealer of former section 1036 and renumbering an amendment of former section 1039 and 1632 filed 2-13-98 operative 3-15-98 (Register 98, no. 7)

Section 1037 *Audit of the Portfolio Competency Examination Process*

Each school's portfolio examination process shall be audited at least biennially by the board. An audit shall be confined to the portfolio examination process and may be an onsite or offsite review of the examination process. Members of the audit team shall remain objective and neutral to the interest of the school being audited. Members of the audit team shall in no way infringe on any school curriculum, administration or any other function and shall restrict their duties to reporting directly to the Board

(a) An audit team shall be comprised of faculty from the school and Board appointed auditors. Board appointed auditors may be former licensure examiners or other dentists licensed by the Board.

(b) Dentist appointed to the Board's audit team must have:

(1) A valid, active California dental licensee and

(2) No pending disciplinary action

(c) The audit team shall collect information about the administrative and psychometric aspects of the portfolio examination for the purpose of verifying compliance with the board's portfolio examination regulations.

(d) The audit team may conduct a site visit to verify portfolio documents and/or to clear up unresolved questions.

(e) The audit team's approach to evaluation of a school portfolio examination shall be standardized. Each school shall be asked standardized questions using criteria agreed upon by the schools and the board for evaluations.

(f) The audit team shall prepare a written report to the board that documents the strengths and weakness of each school's board portfolio examination process and provide recommendations for improvement.

(g) The Board shall provide the school with a report of the audit. In the event the audit identifies deficiencies, such deficiencies shall be noted in the report to the school.

(h) The school shall be given a sufficient amount of time to correct deficiencies. The board may conduct a second audit to ensure deficiencies have been corrected.

(i) Failure to correct deficiencies may result in suspension or withdrawal of the schools participation in the portfolio examination process.

(j) A school may be reinstated to participate in the portfolio examination process upon proof deficiencies have been corrected. The board shall conduct a follow-up audit within 120 days to verify deficiencies have been corrected.