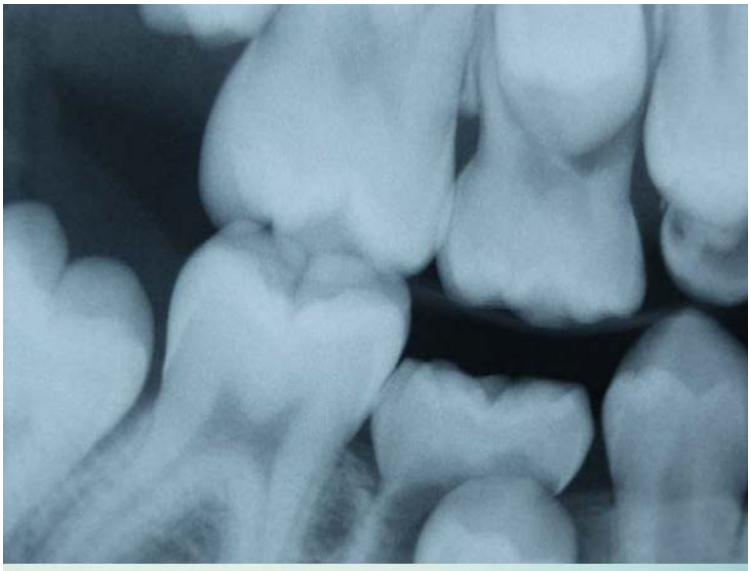
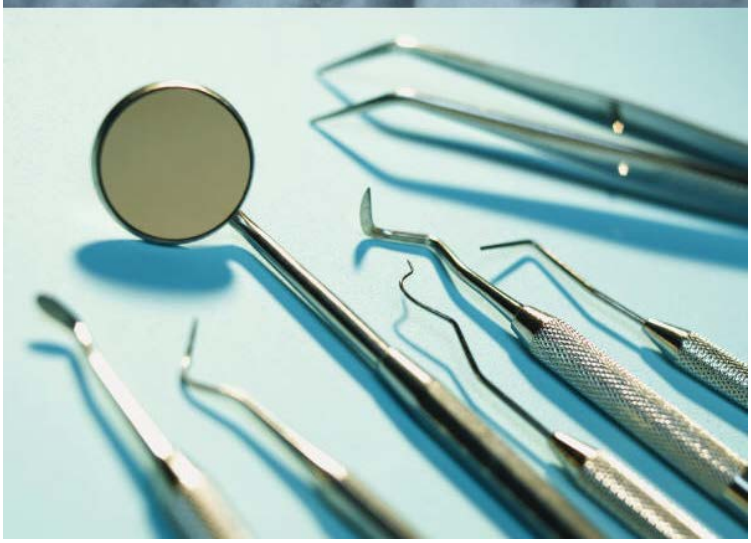
PORTFOLIO EXAMINATION CANDIDATE HANDBOOK





Dental Board of California

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Chapter 1 – Introduction

This Candidate Handbook is designed to provide information for students who elect the Portfolio Examination pathway to initial dental licensure.

The purpose of this handbook is to provide candidates with detailed information about the Portfolio Examination ("Portfolio"). The handbook includes information about patient criteria; subject matter areas assessed by the examination, and standardized rating (grading) criteria.

Chapter 2 – Background

History

In January 2007, the Board initiated the process of re-evaluating the California Clinical Examination, and worked with the dental schools in California to explore alternative methods of assessing dental school students for initial dental licensure.

The Portfolio Examination was born out of the desire to eliminate the need to administer a stand-alone examination to those student candidates who met the requirements set by the Board. While this new type of assessment would exceed the present requirements for testing on actual patients, it is also based on achieving a required number of clinical experiences.

The plan was to require clinical experiences in oral diagnosis and treatment planning, direct restoration, indirect restoration, removable prosthodontics, endodontics and periodontics. Competency would be demonstrated through series of standardized competency examinations to be developed by committees of faculty from California dental schools. Calibration, standardization, verification and cooperation are the important components of this new and novel approach to assessing candidates for initial licensure in California.

By July 2008, the Board commissioned an analysis of assessment methods prior to determining the Portfolio Examination as a viable pathway to qualify for licensure in California. Assembly Bill 1524, sponsored by the Dental Board of California, abolished the clinical and written examination administered by the Dental Board of California and replaced that examination with a Portfolio Examination of a candidate's competence to enter the practice of dentistry.

In 2009, committees of faculty from six dental schools began work on developing patient parameters and grading criteria for the standardized evaluation system. The faculty represented all six dental schools: University of California, Los Angeles; University of California, San Francisco; Loma Linda University; University of the Pacific; University of Southern California; and Western University of Health Sciences.

Premise

The Portfolio Examination allows candidates to build a portfolio of completed clinical experiences ***and*** clinical competency examinations in six subject areas over the normal course of clinical training. Both clinical experiences and clinical competency examinations are performed on patients of record within the normal course of treatment. The primary difference between clinical experiences and clinical competency examinations is that the clinical competency examinations are performed independently without faculty intervention unless patient safety issues are imminent.

The Portfolio Examination is conducted while the applicant is enrolled in a dental school program at a California Board approved dental school. A student may elect to begin the Portfolio Examination process during the clinical training phase of their dental education, with the approval of his/her clinical faculty.

The Portfolio Examination follows a similar structure for candidate evaluation that currently exists within the schools to assess minimum competence. The faculty observes the treatment provided and evaluates candidates according to standardized criteria developed by a consensus of key faculty from all of the dental schools. Each candidate prepares and submits a portfolio of documentation that provides proof of completion of competency evaluations for specific procedures in six subject areas: oral diagnosis and treatment planning, direct restoration (amalgam/composite), indirect restoration (fixed prosthetics), removable prosthodontics, endodontics and periodontics.

If a candidate fails to pass any of the six Portfolio competency examinations after three (3) attempts, the applicant is not eligible for re-examination in that competency until he or she has successfully completed the minimum number of required remedial education hours in the failed competency. The remedial course work content may 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. When a candidate applies for re-examination he or she must furnish evidence of successful completion of the remedial education requirements for re-examination to the examiner. The remediation form must be signed and presented prior to re-examination.

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

Distinguishing characteristics

There are 10 distinguishing characteristics of the Portfolio Examination:

- *First*, the Portfolio Examination is considered a performance examination that assesses candidates' skills in commonly encountered clinical situations. Consequently, the Portfolio Examination must meet legal standards (Sections 12944 of the Government Code, Section 139 of the Business and Professions Code) and psychometric standards set forth by the Standards for Educational and Psychological Testing.

- *Second*, the Portfolio Examination is a ***summative*** assessment of a candidate's competence to practice independently. Therefore, candidates perform clinical procedures without faculty intervention in the competency examinations. If a candidate commits a critical error at any time during a competency examination, the examination is terminated immediately in the interests of patient safety.

- *Third*, it includes components of clinical examinations similar to other clinical examinations, ***and***, is administered in a manner that is similar to other clinical

examinations encountered in the candidates' course of study. The multiple clinical examinations allow for an evaluation of the full continuum of competence. No additional resources are required from candidates, schools or the Board.

- *Fourth*, treatments for candidates' clinical experience and competency examinations are rendered on patients of record. This means that candidates' competence is not evaluated in an artificial or contrived situation, but on patients who require dental interventions as a normal course of treatment and their progress can be monitored beyond the scope of the clinical experiences or competency examinations.

- *Fifth*, candidates must complete a minimum number of clinical experiences as required for each of six competency domains.

- *Sixth*, readiness for the Portfolio competency examinations is determined by the clinical faculty at the institution where the candidate is enrolled.

- *Seventh*, each of the schools will designate faculty as Portfolio competency examiners and is responsible for administering a Board approved standardized calibration training course for said examiners. The schools are also responsible for the calibration of Portfolio examiners' performance to ensure consistent implementation of the examination and a standardized examination experience for all candidates.

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

- *Ninth*, it produces documented data for outcomes assessment of results, thereby allowing for verification of validity evidence. The data provides the foundation of periodic audits of each school conducted by the Board to ensure that each school is implementing the Portfolio Examination according to the standardized procedures.

- *Tenth*, there are policies and procedures in place to treat candidates fairly and professionally, with timely and complete communication of examination results.

Development

The Portfolio Examination has been developed by psychometric consultants for the Dental Board of California in collaboration with committees of dental faculty knowledgeable in the six subject areas. The Portfolio Examination meets 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. The Standards are used as a benchmark by the measurement profession as the

psychometric standards for validating all examinations, including licensing and certification examinations.

Because the Portfolio Examination is a state licensure examination, it also meets legal standards as explicated in Sections 12944 of the California Government Code and Section 139 of the California Business and Professions Code. Section 12944 relates to establishment of qualifications for licensure that do not adversely affect any class by virtue of race, creed, color, national origin/ancestry, sex, gender, gender identity, gender expression, age, medical condition, genetic information, physical disability, mental disability, or sexual orientation. Section 139 of the California Business and Professions Code states occupational licensure examination programs must be based upon occupational (job/practice) analyses and examination validation studies.

Chapter 3 – General Information

Summary of requirements

AGE	• At least 18 years old
IDENTIFICATION NUMBER	• School will request a Portfolio Candidate Identification number for each candidate.
APPLICATION	• Complete the Board "Application for Law and Ethics Examination. • Complete the Board "Application for Determination of Licensure Eligibility (Portfolio)"
REQUIREMENTS	• Successful completion of all competency examinations specified for the Portfolio Examination • Certification of good academic standing by the dean of the student's dental school attended by the applicant such that the applicant is expected to graduate from said dental school; no pending ethical issues • Minimum number of clinical experiences • NBDE Passing Results • Passing the Dentistry Law and Ethics Examination • Certification of Licensure (If licensed in another country) • Submission of fingerprints

Application for Licensure by Portfolio

Applicants must include the following information in the "Application for Determination of Licensure Eligibility (Portfolio)."

a) Full legal name.
b) United States social security number.
c) Address of residency.
d) Mailing address, if different from address of residency.
e) Date of birth.
f) Telephone number (home and/or cell phone.)
g) Gender of applicant
h) A 2" by 2" passport style photograph of the applicant.
i) Information as to whether the applicant has ever taken the California Law and Ethics written examination.
j) Information regarding applicant's education including dental education and postgraduate study.
k) 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.
l) 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 must 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.

m) 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 must provide any additional information requested by the Board.
n) 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 must 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.
o) 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 must be provided including state or country of surrender, date of surrender, reason for surrender, and any other information requested by the Board.
p) Information as to whether the applicant has ever been convicted of any violation of the law in this or any other state, the United States, or other country, omitting traffic infractions under $1,000 not involving alcohol, dangerous drugs, or controlled substances. For the purposes of this section, “conviction” means a plea or verdict of guilty or a conviction following a plea of nolo contendere or “no contest” and any conviction that has been set aside or deferred pursuant to Sections 1000 or 1203.4 of the Penal Code, including infractions, misdemeanors, and felonies;
q) Information as to whether the applicant is in default on a United State Department of Health and Human Services education loan pursuant to Sections 685 of the Code.
r) A certification, under the penalty of perjury, by the applicant that the information on the application is true and correct.

Applicant mailing address

All mail from the Board will be sent to the mailing address indicated on the application. If an applicant changes his or her address or wishes information be sent to another address, he or she must notify the Board, in writing, of the change. Failure to notify the Board of a change of address may prevent the applicant from receiving relevant information.

Certification of good standing

An application for Determination of Licensure Eligibility (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 will not

issue a license, until receipt of a certification letter from the dean of the school attended by the applicant, certifying the date the applicant graduated on school letterhead with the school seal.

Submission of Portfolio to the Board

A candidate must arrange with the school to have his or her completed Portfolio submitted to the Board. The earliest date that a student may submit their portfolio for review by the Board will be 90 days before graduation. The Portfolio will not reviewed by the Board until the "Application for Determination of Licensure Eligibility (Portfolio) has been received along with the required fee.

The Application and completed Portfolio may be submitted for review within 90 days of graduation. The latest date upon which an Application and completed Portfolio must be submitted for review will be no more than 90 days after graduation.

Issuance of license

The Board will review the submitted Portfolio materials to determine that it is complete and that the candidate has met the requirements. Once approved, the candidate will be sent an "Application for Issuance of License Number and Registration of Place of Practice".

Criminal background check

California law requires all applicants to undergo, a criminal background check. Fingerprints can be obtained by using Live Scan. A dental license will not be issued until clearance has been received from the California Department of Justice (DOJ) and the Federal Bureau of Investigation (FBI).

Live Scan is available only in California, for either residents or visitors, and is more efficient than the Ink on Cards method. To use the Live Scan method, download the Live Scan form, complete it and take it to a Live Scan service location. The Live Scan service location will require you to pay a fee to process your prints. Fees for this service may vary. Your fingerprints will be taken electronically, without ink, and transmitted to the California DOJ and FBI. Finally, the DOJ/FBI will send their report to the Dental Board. Usually the report is received within seven days. There is a low rate of rejections with this method.

For a list of Live Scan locations and a copy of the live scan form you may visit the Board's website at: http://www.dbc.ca.gov/formspubs/form_livescan_dds.pdf or call (916) 263-2300.

Schools offering the Portfolio Examination

Students who engage in the Portfolio Examination process will take standardized competencies at the school in which they are enrolled. A list of dental schools is presented below:

Location	School
Loma Linda	Loma Linda University School of Dentistry 11092 Anderson Street Loma Linda, California 92350
Los Angeles	University of California, Los Angeles School of Dentistry 10833 Le Conte Avenue Los Angeles, California 90024
	University of Southern California Ostrow School of Dentistry 925 West 34th Street Los Angeles, California 90089
Pomona	Western University of Health Sciences College of Dental Medicine 309 East Second Street Pomona, California 91766
San Francisco	University of California, San Francisco School of Dentistry 707 Parnassus Avenue San Francisco, CA 94143
	University of the Pacific Arthur A. Dugoni School of Dentistry 2155 Webster Street San Francisco, California 94115

Chapter 4 – Board policies

The following rules are in addition to any other examination rules set forth elsewhere in this guide and are adopted for the uniform conduct of the Portfolio Examination.

Radiographs

Radiographs for Portfolio competency examinations must be of diagnostic quality either digital or conventional.

Infection control

Candidates are responsible for maintaining all of the standards of infection control while treating patients. This includes the appropriate sterilization and disinfection of the cubicle, instruments and handpieces, as well as, the use of barrier techniques (including glasses, mask, gloves, proper attire, etc.) as required by OSHA and the Dental Practice Act.

Use of local anesthetics

Local anesthetics must be administered according to school protocol and standards of care. The type and amount of anesthetics must be consistent with the patient's medical history and current condition.

Use of dental dams

Dental dams must be used during endodontic treatment and the preparation of amalgam and composite restorations. Finished restorations will be graded without the dental dam in place.

Personal protective equipment

Candidates must wear masks, gloves and eye protection during this section of the examination.

Patients of record

Candidates will provide clinical services upon patients of record of the dental school who fulfill the acceptable patient selection criteria for each of the Portfolio competency examinations.

Identification numbers

Candidates will be assigned by the Board an identification number to be used for all Portfolio competency examinations prior to completing any competency examination.

Patient treatment session time limits

Candidates will be allowed 3 hours, 30 minutes for each patient treatment session.

Chapter 5 – Overview

Definitions

CANDIDATE	A dental student who is taking the examination for the purpose of applying to the Board for licensure.
CASE	A dental procedure which satisfies the required clinical experiences
CLINICAL EXPERIENCES	Procedures, performed with or without faculty intervention, that the candidate must complete to the satisfaction of his or her clinical faculty prior to submission of his or her portfolio examination application. Clinical experiences have been determined as a minimum number in order to provide a candidate with sufficient understanding, knowledge and skill level to reliably demonstrate competency.
COMPETENCY EXAMINATION	A candidate's final assessment in a portfolio examination competency performed without faculty intervention and graded by competency examiners registered with the Board.
CRITICAL ERROR	A critical error is a gross error that is irreversible or may impact the patient's safety and wellbeing.
PATIENT MANAGEMENT	The interaction between patient and candidate from initiation to completion of treatment, including any post-treatment complications that may occur.
PORTFOLIO	The cumulative documentation of clinical experiences and competency examinations submitted to the Board.
PORTFOLIO COMPETENCY EXAMINERS	The dental school faculty examiner. The portfolio competency examiner must be a faculty member chosen by the school, registered with the Board, and must be trained and calibrated to conduct and grade the portfolio competency examinations.
SCHOOL	A Board-approved dental school located in California.

Demonstrations of clinical experience

Each candidate must complete at least the minimum number of clinical experiences in each competency prior to submission of their Portfolio to the Board. Clinical experiences have been determined as a minimum number in order to provide a candidate 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 must be included in the Portfolio submitted to the Board. Clinical experience may be obtained at the dental school clinic, an extramural dental facility or a mobile dental clinic approved by the Board.

Required elements

The Portfolio Examination must contain documentation of the minimum clinical experiences and document of clinical competency examination as follows:

- Documentation that provides proof of satisfactory completion of a final assessment in the competency examinations prescribed by the Board. ”Satisfactory proof” means the portfolio has been approved by the designated dental school faculty.

Satisfactory evidence the candidate has completed the clinical experiences prescribed by the Board.

- Certification from the dean of the qualifying dental school attended by the applicant to certify the applicant has graduated with no pending ethical issues;
- Certification from the dean certifying the candidate will graduate with no pending ethical issues.

Competency examinations vs. clinical experiences

A competency examination is performed without faculty intervention; however, completion of a successful competency examination may be counted as a clinical experience for the purposes of the Portfolio Examination.

Guidelines

- Candidates perform Portfolio competency examinations independently without faculty intervention.
- Schools have the option of using the same faculty to grade each competency examination.
- Each of the schools will have designated faculty as competency examiners and is responsible for administering the Board approved calibration course for competency examiners.
- Each competency examination will be graded by two (2) examiners.
- If a candidate fails a Portfolio competency examination three (3) times, the candidate cannot take the same Portfolio competency examination until remedial education has been completed.
- Readiness for Portfolio competency examinations is determined by clinical faculty.

Portfolio examiners

The Board has outlined a process for selection of dental school faculty who wish to serve as a Portfolio competency examiner.

a) At the beginning of each school year, the Dean at each school submits a letter verifying the Portfolio examiner meets the requirements of the Board and includes the names, credentials and qualifications of the dental school faculty to be approved by the Board as Portfolio examiners. Documentation of qualifications must include, evidence the dental school faculty examiner satisfies the dental school criteria and standards established by his/her school to conduct Portfolio competency examinations. The school faculty examiner must have documented experience in conducting examinations in an objective manner, shall be a full-time or part-time faculty member of a Board-approved California dental school, have a minimum of one (1) year of previous experience in administering clinical examinations, and undergo calibration training in the Board's standardized evaluation system through didactic and experiential methods. Portfolio competency examiners are required to attend Board-approved standardized calibration training sessions offered at their schools prior to administering a competency examination and annually thereafter.

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

c) The Board reserves the right to approve or disapprove dental school faculty who wish to serve as Portfolio examiners.

Scoring

Each Portfolio competency examination will be graded by two (2) independent competency examiners in accordance with the Board's standardized rating (grading) criteria on forms prescribed by the Board. The Portfolio Examination must be signed by the school faculty Portfolio competency examiners for the prescribed competency.

Patient safety

If the patient's well-being is put into jeopardy at any time during the examination, the examination will be terminated. The candidate fails the examination, regardless of performance on any other part of the examination.

Critical errors

A critical error is a gross error that is irreversible, and/or may impact patient safety and wellbeing. If a candidate commits a critical error, the candidate cannot proceed with the examination.

If the candidate makes a critical error at any point during a Portfolio competency examination, a score of "0" is assigned and the Portfolio competency examination is terminated immediately.

Minimum competence level of performance

The minimum competence ratings for Portfolio competency examinations are identified in the description of the rating scales.

Within a given competency examination, a low rating in one area can be offset by a higher rating in another area.

- For Oral Diagnosis and Treatment Planning, Endodontics, and Periodontics, a rating of "2" (rating scale 0, 1, 2, 3, 4) is considered minimum competence level performance.

- For Direct Restoration and Indirect Restoration, a rating of "3" (rating scale 0, 1, 2, 3, 4, 5) is considered minimum competence level performance.

- For Removable Prosthodontics, a rating of "3" (rating scale 1, 2, 3, 4, 5) is considered minimum competence level performance.

Scaled scores

- Ratings for each Portfolio competency examination based on a total of rating points, rather than an average of rating points.

- Total points for each Portfolio competency examination will be converted to scaled scores to place them on a common metric.

- A scaled score of 75 is considered a passing score for each Portfolio competency examination.

Compensatory model

Within a given competency examination, a low rating in one area can be compensated by a higher score in another area.

For example, a candidate who achieves a scaled score 76 from one examiner and 74 from another examiner will be credited for a scaled score 150 based on total points.

Likewise, a candidate who achieves a scaled score of 75 from one examiner and 75 from another examiner will be credited with a scaled score 150 based on total points.

Chapter 6 – Oral Diagnosis and Treatment Planning

Purpose

The competency examination for oral diagnosis and treatment planning (ODTP) is designed to assess the candidate's ability to identify and evaluate patient data and clinical findings; formulate diagnoses; and plan treatment interventions from a multidisciplinary perspective.

Clinical experiences

The documentation of oral diagnosis and treatment planning clinical experiences will include a minimum of twenty (20) patient cases.

Clinical experiences for ODTP include:

- Comprehensive oral evaluations,
- Limited (problem-focused) oral evaluations, and
- Periodic oral evaluation

Each examination, ODTP clinical experience requires medical and dental history, identified problem(s), diagnoses, treatment plans, and informed consent.

Overview

- Fifteen (15) scoring factors.
- Initiation and completion of one (1) multidisciplinary Portfolio competency examination.
- Treatment plan must involve at least three (3) of the following six disciplines:

  > Periodontics
  > Endodontics
  > Operative (direct and indirect restoration)
  > Fixed and removable prosthodontics
  > Orthodontics
  > Oral surgery

Patient parameters

- Maximum of ASA II as defined by the American Society of anesthesiologists (ASA) Physical Status Classification System.
- Missing or will be missing two or more teeth, NOT including third molars.
- At least moderate periodontitis with probing depths of 5 mm or more.

Scoring

Scoring points for oral diagnosis and treatment planning are defined as follows:

- A score of 0 is unacceptable; candidate exhibits a critical error
- A score of 1 is unacceptable; major deviations that are correctable
- **A score of 2 is acceptable; minimum competence**
- A score of 3 is adequate; less than optimal
- A score of 4 is optimal

Elements of the ODTP Portfolio

The oral diagnosis and treatment planning portfolio may include, but is not limited to the following:

a) Patient's Medical history must include: an evaluation of past illnesses and conditions, hospitalizations and operations, allergies, family history, social history, current illnesses and medications, and their effect on dental condition.

b) Patient's Dental history must include: age of previous prostheses, existing restorations, prior history of orthodontic/periodontic treatment, and oral hygiene habits/adjuncts.

c) Documentation of a comprehensive examination for dental treatment provided to patients includes:

(1) Interpretation of radiographic series
(2) Performance of caries risk assessment
(3) Determination of periodontal condition
(4) Performance of a head and neck examination, including oral cancer screening
(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 candidate evaluated data to identify problems. The documentation of the data evaluation includes:

(1) Chief complaint
(2) Medical problem
(3) Stomatognathic problems
(4) Psychosocial problems

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

(1) Problem definition, e.g., severity/chronicity and classification

(2) Determination if additional diagnostic tests are needed
(3) Development of a differential diagnosis
(4) Recognition of need for referral(s)
(5) Pathophysiology of the problem
(6) Short term needs
(7) Long term needs
(8) Determination interaction of problems
(9) Development of treatment options
(10) Determination of prognosis
(11) Patient information regarding informed consent

f) Documentation the candidate developed a final treatment plan. The documentation includes:

(1) Rationale for treatment
(2) Problems to be addressed, or any condition that puts the patient at risk in the long term
(3) Determination of sequencing with the following framework:

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

ODTP scoring criteria

FACTOR 1: MEDICAL ISSUES THAT IMPACT DENTAL CARE

4	3	2	1	0
• Identifies and evaluates all medical issues • Explains dental implications of systemic conditions • Identifies and assesses patient medications	• Misses one item that would NOT cause harm	• Misses two items that would NOT cause harm	• Misses more than two items that would cause potential harm	Critical errors include: • Misses medical or medication items that would cause potential harm

FACTOR 2: TREATMENT MODIFICATIONS BASED ON MEDICAL CONDITIONS

4	3	2	1	0
• Identifies all treatment modifications	• Misses one item that would NOT cause harm	• Misses two items that would NOT cause harm	• Misses more than two items that would cause potential harm	Critical errors include: • Misses treatment modifications that would cause potential harm

FACTOR 3: PATIENT CONCERNS/CHIEF COMPLAINT

4	3	2	1	0
• Identifies all patient concerns including chief complaint	• Identifies chief complaint but misses one patient concern	• Identifies chief complaint but misses two patient concerns	• Identifies chief complaint but misses more than two patient concerns	Critical errors include: • Chief complaint NOT identified

FACTOR 4: DENTAL HISTORY

4	3	2	1	0
• Identifies all parameters in dental history	• Misses one parameter in dental history	• Misses two parameters in dental history	• Misses more than two parameters in dental history	Critical errors include: • Neglects to address dental history

FACTOR 5: SIGNIFICANT RADIOGRAPHIC FINDINGS

4	3	2	1	0
• Identifies all radiographic findings	• Misses one radiographic finding that does NOT substantially alter treatment plan	• Misses two radiographic findings that do NOT substantially alter treatment plan	• Misses more than two radiographic findings that do NOT substantially alter treatment plan	Critical errors include: • Misses radiographic findings that substantially alters treatment plan

FACTOR 6: CLINICAL FINDINGS

4	3	2	1	0
• Identifies all clinical findings	• Misses one clinical finding that does NOT substantially alter treatment plan	• Misses two clinical findings that do NOT substantially alter treatment plan	• Misses more than two clinical findings that do NOT substantially alter treatment plan	Critical errors include: • Misses clinical findings that substantially alter treatment plan

FACTOR 7: RISK LEVEL ASSESSMENT

4	3	2	1	0
• Risk level (risk factors/indicators and protective factors) identified • Relevance of risk level identified	• Risk level and relevance of risk level identified but misses one item (risk factors/ indicators and protective factors)	• Risk level and relevance of risk level identified but misses two items (risk factors/indicators and protective factors)	• Risk level identified but misses more than two items (risk factors/indicators and protective factors) • Relevance of risk level NOT identified	Critical errors include: • Risk level NOT identified

FACTOR 8: NEED FOR ADDITIONAL DIAGNOSTIC TESTS/REFERRALS

4	3	2	1	0
• Prescribes/acquires all clinically necessary diagnostic test and referrals with comprehensive rationale	• Identifies need for clinically necessary diagnostic tests and referrals with limited rationale	• Identifies need for additional diagnostic tests and referrals without rationale	• Identifies need for additional diagnostic tests and referrals without rationale and prescribes non-contributory test or referrals	Critical errors include: • Does NOT identify clinically necessary diagnostic tests or referrals

FACTOR 9: FINDINGS FROM MOUNTED DIAGNOSTIC CASTS

4	3	2	1	0
• Casts and mounting reflect patient's oral condition • Identifies all diagnostic findings from casts	• Casts and mounting reflect patient's oral condition • Misses one diagnostic finding that does NOT substantially alter treatment plan	• Casts and mounting reflect patient's oral condition but misses two diagnostic findings that do NOT substantially alter treatment plan	• Casts and mounting reflect patient's oral condition but misses more than two diagnostic findings that do NOT substantially alter treatment plan	Critical errors include: • Casts and mounting do NOT reflect patient's oral condition • Misses diagnostic cast findings that substantially alter treatment plan

FACTOR 10: COMPREHENSIVE PROBLEM LIST

4	3	2	1	0
• All problems listed	• One problem NOT identified without potential harm to patient	• Two problems NOT identified without potential harm to patient	• Two or more problems NOT identified without potential harm to patient	Critical errors include: • Problems with potential for harm to patient NOT identified

FACTOR 11: DIAGNOSIS AND INTERACTION OF PROBLEMS

4	3	2	1	0
• All diseases correctly diagnosed • All interactions identified	• One missed diagnosis or interaction without potential harm to patient	• Two missed diagnoses or interactions without potential harm to patient	• More than two missed diagnoses or interactions without potential harm to patient	Critical errors include: • Missed diagnosis or interaction resulting in potential harm to patient

FACTOR 12: OVERALL TREATMENT APPROACH

4	3	2	1	0
• All treatment options identified within standard of care; provides rationale which is optimal	• All treatment options identified within standard of care; provides acceptable rationale	• All treatment options identified within standard of care and lacks sound rationale for treatment	• Incomplete treatment options and lacks sound rationale for treatment	Critical errors include: • Treatment options presented are NOT within standard of care

FACTOR 13: PHASING AND SEQUENCING OF TREATMENT

4	3	2	1	0
• Treatment optimally phased and sequenced	• Treatment phased correctly but one procedure out of sequence with no harm to patient	• Treatment phased correctly but two procedures out of sequence with no harm to patient	• Treatment NOT phased correctly but no potential harm to patient	Critical errors include: • Treatment NOT phased nor sequenced with potential harm to patient

FACTOR 14: COMPREHENSIVENESS OF TREATMENT PLAN

4	3	2	1	0
• Treatment plan addresses all problems • All treatment procedures are indicated	• One treatment procedure that is NOT indicated but will NOT result in harm to patient but treatment plan addresses all problems	• Two or more treatment procedures that are NOT indicated but reflect problem list but treatment plan addresses all problems	• Two or more treatment procedures that are NOT indicated and do NOT reflect problem list • Treatment plan is incomplete but does NOT cause harm to patient	Critical errors include: • Treatment plan is incomplete and causes potential harm to patient • Treatment procedures included that are NOT indicated resulting in harm to patient • Treatment procedures are missing from treatment plan resulting in harm to patient

FACTOR 15: TREATMENT RECORD

4	3	2	1	0
• Summarizes all data collected, diagnoses, and comprehensive rationale for treatment options • Documents presentation of risks and benefits of all treatment options	• Summarizes all data collected, diagnoses, and treatment options, documents presentation of risks and benefits of all treatment options and provides limited rationale	• Summarizes all data collected, diagnoses, and treatment options, documents presentation of risks and benefits of all treatment options but provides no rationale	• Summarizes all data collected, diagnoses, and treatment options, and documents presentation of risks and benefits only for preferred option	Critical errors include: • Does NOT summarize all data collected, diagnoses and/or treatment options • Does NOT document presentation of risks and benefits of all treatment options

Chapter 7 - Direct Restoration

Purpose

The competency examinations for direct restoration are designed to assess the candidate's independent ability to restore teeth with interproximal primary carious lesions to optimal form, function and esthetics.

Clinical experiences

The documentation of direct restorative clinical experiences includes a minimum of sixty (60) restorations.

The restorations completed in the clinical experiences may include any restoration on a permanent or primary tooth using standard restorative materials including:

- Amalgams,
- Composites,
- Crown buildups,
- Direct pulp caps, and,
- Temporizations.

Overview

- Seven (7) scoring factors.
- Two (2) restorations:
  - > Class II amalgam or composite; maximum one slot preparation, and,
  - > Class III or IV composite
- Restoration can be performed on an interproximal lesion on one interproximal surface in an anterior tooth that does not connect with a second interproximal lesion which can be restored separately.
- Requires a case presentation for which the proposed treatment is appropriate for patient's medical and dental history, is in appropriate treatment sequence, and treatment consent is obtained.
- Requires patient management. Candidate must be familiar with patient's medical and dental history.
- Medical conditions must be managed appropriately.
- Any treatment modifications needed are consistent with the patient's medical history.

Patient parameters

Class II – Any permanent posterior tooth

Treatment needs to be performed in the sequence described in the treatment plan

- More than one test procedure can be performed on a single tooth; teeth with multiple lesions may be restored at separate appointments.
- Caries as shown on either of the two required radiographic images of an unrestored proximal surface must extend to or beyond the dento-enamel junction.
- Tooth to be treated must be in occlusion.
- 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.
- Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment.
- Tooth with bonded veneer is not acceptable.

Class III/IV – Any permanent anterior tooth

- Treatment needs to be performed in the sequence described in the treatment plan.
- Caries as shown on the required radiographic image of an unrestored proximal surface must extend to or beyond the dento-enamel junction.
- Carious lesions must involve the interproximal contact area.
- 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.
- Tooth must be asymptomatic with no pulpal or periapical pathology; cannot be endodontically treated or in need of endodontic treatment.
- Approach must be appropriate for the tooth.
- Tooth with bonded veneer is not acceptable.
- The lesion is not acceptable if it is in contact with circumferential decalcification.

Scoring

Scoring points for direct restorations are defined as follows:

- A score of 0 is unacceptable; candidate exhibits a critical error
- A score of 1 is unacceptable; multiple major deviations that are correctable
- A score of 2 is unacceptable; one major deviation that is correctable
- **A score of 3 is acceptable; minimum competence**
- A score of 4 is adequate; less than optimal
- A score of 5 is optimal

Elements of the Direct Restoration Portfolio

The Direct Restoration portfolio may include, but is not limited to the following:

a) Documentation of the candidate'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 must 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 candidate'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 must 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.

Direct Restoration scoring criteria

FACTOR 1: CASE PRESENTATION

5	4	3	2	1	0
• Obtains informed consent • Presents a comprehensive review of medical and dental history • Provides rationale for restorative procedure • Proposes initial design of preparation and restoration • Demonstrates full understanding of the procedure	• Slight deviation from optimal case presentation	• Moderate deviation from optimal case presentation	• Major deviation from optimal case presentation	• Multiple major deviations from optimal case presentation	• Critical errors in assessing patient's medical and/or dental history • Unable to justify treatment • Proposed treatment would cause harm to patient • Proposed treatment not indicated • Misses critical factors in medical and/or dental review that affect treatment or patient well being

FACTOR 2: OUTLINE AND EXTENSIONS

5	4	3	2	1	0
• Optimal outline and extensions such as: > 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(s) from optimal; minimal impact on treatment	• Moderate, clinically acceptable deviation(s) from optimal; minimal impact on treatment	• Major deviation 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 deviations from optimal including: > 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	• Critical errors in outline and extensions • Deviations from optimal that are irreversible and have a significant impact on treatment • Damage to adjacent tooth that requires restoration

FACTOR 3: INTERNAL FORM

5	4	3	2	1	0
• Optimal internal form such as: > 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(s) from optimal	• Moderate, clinically acceptable deviation(s) from optimal	• Major deviation 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 deviations from optimal including: > 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	• Critical errors from optimal internal form • Noncarious pulp exposure

FACTOR 4: OPERATIVE ENVIRONMENT

5	4	3	2	1	0
• Soft tissue free of unnecessary damage • Proper patient comfort/pain management • Optimal isolation • Correct teeth isolated • Dam fully inverted • Clamp stable with no tissue damage • No leakage • Preparation can be accessed and visualized	• Slight deviation(s) from optimal	• Moderate, clinically acceptable deviation(s) from optimal	• Major deviation from optimal <u>such as</u>: > Incorrect 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 > Major tissue damage	• <u>Multiple</u> major deviations from optimal <u>including</u>: > Incorrect 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 > Major tissue damage	• Critical errors from optimal in operative environment • Gross soft tissue damage • Gross lack of concern for patient comfort

FACTOR 5: ANATOMICAL FORM

5	4	3	2	1	0
• Optimal anatomic form such as: > 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(s) from optimal	Moderate, clinically acceptable deviation(s) from optimal	• Major deviation from optimal such as: > Inconsistent with adjacent tooth structure > Interproximal contour and shape are inappropriate > Height and shape of marginal ridge is inappropriate	• Multiple major deviations from optimal including: > Inconsistent with adjacent tooth structure > Interproximal contour and shape are inappropriate > Height and shape of marginal ridge is inappropriate	• Critical errors that require restoration to be redone

FACTOR 6: MARGINS

5	4	3	2	1	0
• Optimal margins • No deficiencies or excesses	• Slight deviation(s) from optimal	• Moderate, clinically acceptable deviation(s) from optimal	• Major deviation from optimal such as: > Open margin, submarginal, and/or excess restorative material	• Multiple major deviations from optimal	• Critical errors that require restoration to be redone

FACTOR 7: FINISH AND FUNCTION

5	4	3	2	1	0
• Optimal finish and function <u>such as</u>: > 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(s) from optimal	Moderate, clinically acceptable deviation(s) from optimal	• Major deviation from optimal <u>such as</u>: > Significant pits, voids or irregularities in the surfaces > Severe hyper-occlusion or hypo-occlusion > Moderate damage to hard or soft tissue	• <u>Multiple</u> major deviations from optimal	• Critical errors that require restoration to be redone • Procedure is not completed within allotted time • Unnecessary, gross damage to hard and soft tissue as related to finishing procedure

Chapter 8 - Indirect Restoration

Purpose

The competency examinations for indirect restoration are designed to assess the candidate's independent ability to restore teeth requiring an indirect restoration to optimal form, function and esthetics with a full or partial coverage ceramic, metal or metal-ceramic indirect restoration.

Clinical experiences

The documentation of indirect restorative clinical experiences will include a minimum of fourteen (14) restorations.

The restorations completed in the clinical experiences may be a combination of the following procedures:

> Inlays,
> Onlays,
> Crowns,
> Abutments,
> Pontics,
> Veneers,
> Cast posts,
> Overdenture copings, or
> Dental implant restorations.

Overview

- Seven (7) scoring factors.
- One (1) indirect restoration which may be a combination of the following procedures:
  > Ceramic restoration must be onlay or more extensive
  > Partial gold restoration must be onlay or more extensive
  > Metal ceramic restoration (PFM)
  > Full gold restoration
- Requires a case presentation for which the proposed treatment is appropriate for patient's medical and dental history, is in appropriate treatment sequence, and treatment consent is obtained.
- Requires patient management; candidate must be familiar with the patient's medical and dental history.
- Medical conditions must be managed appropriately.
- Any treatment modifications needed must be consistent with the patient's medical history.

Patient parameters

- Treatment needs to be performed in the sequence described in the treatment plan
- Tooth must be asymptomatic with no pulpal or periapical pathosis; cannot be in need of endodontic treatment.
- Tooth must be in occlusal contact with a natural tooth or a permanent restoration. Occlusion with a full or partial denture is not acceptable.
- The restoration must include at least one cusp.
- 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.
- The tooth must require an indirect restoration at least the size of an onlay or greater. The tooth cannot replace existing or temporary crowns.
- The candidate may not have performed any portion of the crown preparation in advance.
- Direct restorative materials which are placed to contribute to the retention and resistance form of the final restoration (buildups) may be completed ahead of time, if needed.
- Restoration must be completed on the same tooth and same patient by the same candidate.
- Validated lab or fabrication error will allow a second delivery attempt starting from a new impression or modification of the existing crown.
- Teeth with cast post are not allowed.
- A facial veneer is not acceptable.

Scoring

Scoring points for indirect restoration are defined as follows:

- A score of 0 is unacceptable; candidate exhibits a critical error
- A score of 1 is unacceptable; multiple major deviations that are correctable
- A score of 2 is unacceptable; one major deviation that is correctable
- **A score of 3 is acceptable; minimum competence**
- A score of 4 is adequate; less than optimal
- A score of 5 is optimal

Elements of the Indirect Restoration Portfolio

The Indirect Restoration portfolio may include, but is not limited to the following:

a) Documentation of the candidate'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 candidate.

b) Documentation of the candidate'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 an 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 candidate.

c) Documentation of the candidate'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 an 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 candidate.

d) Documentation of the candidate'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 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 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 an 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.

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

Indirect Restoration scoring criteria

FACTOR 1: CASE PRESENTATION

5	4	3	2	1	0
• Obtains informed consent • Presents a comprehensive medical and dental review • Provides rationale for restorative procedure • Proposes initial design of restoration • Provides method for provisionalization • Demonstrates full understanding of the procedure • Sequencing of treatment follows standards of care	• Slight deviations from optimal case presentation	• Moderate deviations from optimal case presentation	• Major deviation from optimal case presentation • Provides inappropriate justification for treatment • Sequencing of treatment does not follow standards of care	• Multiple major deviations from optimal case presentation	• Critical errors in assessing patient's medical and/or dental history • Unable to justify treatment • Proposed treatment would cause harm to patient • Proposed treatment not indicated • Misses critical factors in medical and dental review that affect treatment or patient well being

FACTOR 2: PREPARATION

5	4	3	2	1	0
• Meets all accepted criteria for optimal preparation: a) Occlusal /incisal reduction b) Axial reduction c) Finish lines d) Caries removal e) Pulpal protection f) Soft tissue management g) No damage to soft and hard tissues h) Resistance and retention i) Debridement	• Slight deviations from optimal; minimal impact on treatment	• Moderate, clinically acceptable deviations from optimal; minimal impact on treatment	• Major deviation from optimal but correctable without significantly changing the procedure	• Multiple major deviations from optimal preparation	• Critical errors that are irreversible and have a significant impact on treatment • Critical errors that require major modifications of the proposed treatment such as: a) Onlay that must change to full crown b) Overextension requiring crown lengthening

FACTOR 3: IMPRESSION

5	4	3	2	1	0
• Achieves optimal, clinically acceptable impression achieved in one attempt a) Impression extends beyond finish lines b) Detail of preparation and adjacent teeth captured accurately c) Free of voids in critical areas d) No aspect of impression technique that would result in inaccuracy e) Interocclusal record is accurate, if needed	• Achieves clinically acceptable impression in second attempt	• Achieves clinically acceptable impression more than two attempts	• Major deviation that require retaking impression <u>such as</u>: > Lack of recognition of unacceptable impression or interocclusal relationship	• <u>Multiple</u> major deviations from optimal in impression <u>including</u>: > Lack of recognition of unacceptable impression or interocclusal relationship	• failure to achieve a clinically acceptable impression after five (5) attempts • Critical errors in impression procedure cause unnecessary tissue damage that require corrective treatment procedures

FACTOR 4: PROVISIONAL

5	4	3	2	1	0
• Meets all accepted criteria for optimal provisional: a) Occlusal form and function b) Proximal contact c) Axial contours d) Marginal fit e) External surfaces smooth and polished without pits, voids, or debris f) Optimal internal adaptation g) Retention h) Esthetics	• Slight deviations from optimal have minimal impact on treatment	• Moderate deviations from accepted criteria have minimal impact on treatment	• Major deviation from optimal that can be corrected <u>such as</u>: > Lack of recognition of major deviation that can be corrected	• <u>Multiple</u> major deviations that have significant impact on treatment <u>including</u>: > Lack of recognition of major deviation that can be corrected	• Critical errors that are clinically unacceptable

FACTOR 5: CANDIDATE EVALUATION OF LABORATORY WORK

5	4	3	2	1	0
• Verifies that restoration meets all accepted criteria • Verifies errors in restoration and proposes changes, if needed	• Lack of recognition of slight deviations from accepted criteria and minimal impact on treatment	• Lack of recognition of moderate deviations from accepted criteria with minimal impact on treatment	• Lack of recognition of major deviation from optimal that can be corrected	• Lack of recognition of multiple major deviations from optimal	• Critical errors that require restoration to be redone

FACTOR 6: PRE-CEMENTATION

5	4	3	2	1	0
• Meets all accepted criteria for pre-cementation: a) Occlusal form and function b) Proximal contact c) Axial contours d) Marginal fit e) External surfaces smooth and polished without pits, voids, or debris f) Optimal internal adaptation g) Retention h) Esthetics i) Patient acceptance	• Lack of recognition of slight deviations from accepted criteria and minimal impact on treatment	• Lack of recognition of moderate deviations from accepted criteria with minimal impact on treatment	• Lack of recognition of major deviation that can be corrected	• Lack of recognition of multiple major deviations from optimal	• Lack of recognition of critical errors which cannot be corrected

FACTOR 7: CEMENTATION AND FINISH

5	4	3	2	1	0
• Meets all accepted criteria for optimal cementation a) Occlusal form and function b) Proximal contact c) Axial contours d) Marginal fit e) External surfaces smooth and polished without pits, voids, or debris f) Optimal internal adaptation g) Retention h) Esthetics i) All excess cement removed j) No unnecessary tissue trauma k) Appropriate postoperative instructions	• Slight deviations from optimal; minimal impact on treatment	• Moderate deviations from accepted criteria; minimal impact on treatment	• Major deviation from accepted that can be corrected	• Multiple major deviations from optimal	• Critical errors which require restoration to be redone • Procedure is not completed within allotted time • Unnecessary, gross damage to hard and soft tissue as related to finishing

Chapter 9 - Removable Prosthodontics

Purpose

The purpose of the competency examinations for removable prosthodontics are designed to assess the candidate's ability to demonstrate clinical skills in all aspects of a prosthesis from diagnosis and treatment planning to delivery of the prosthetic device and post-insertion follow-up.

Clinical experiences

The documentation of removable prosthodontic clinical experiences must include a minimum of five (5) prostheses.

One of the five prostheses may be used as a Portfolio competency examination provided that it is completed in an independent manner with no faculty intervention.

A prosthesis is defined to include any of the following:

> Full denture,
> Partial denture (cast framework),
> Partial denture (acrylic base with distal extension replacing a minimum number of three posterior teeth),
> Immediate treatment denture, or,
> Overdenture retained by natural tooth or dental implants.

Overview

- Twelve (12) scoring factors.
- One (1) of the following prosthetic treatments from start to finish on the same patient
    - > Denture or overdenture for a single edentulous arch, or,
    - > Cast metal framework removable partial denture (RPD) for a single Kennedy Class I or Class II partially edentulous arch
- An immediate or interim denture.
- No patient sharing; cannot split patients between candidates.
- Requires patient management. Candidate must be familiar with patient's medical and dental history.
- Any treatment modifications must be consistent with the patient's medical history.

- Case complexity cannot exceed the American College of Prosthodontics Class II for partially edentulous patients.

Patient parameters

Procedures must be performed on patients with supported soft tissue, implants or natural tooth retained overdentures.

Scoring

Scoring points for removable prosthodontics are defined as follows:

- A score of 1 is unacceptable with gross errors
- A score of 2 is unacceptable with major errors
- **A score of 3 is minimum competence with moderate errors that do not compromise outcome**
- A score of 4 is acceptable with minor errors that do not compromise outcome
- A score of 5 is optimal with no errors evident

Elements of the Removable Prosthodontics Portfolio

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

- Evidence the candidate obtained a patient history, (e.g. medical, dental and psychosocial).
- Evaluation of the patient's chief complaint.
- Radiographs and photographs of the patient.
- Evidence the candidate performed a clinical examination, (e.g. hard/soft tissue charting, endodontic evaluation, occlusal examination, skeletal/jaw relationship, VDO, DR, MIP).
- Evaluation of existing prosthesis and the patient's concerns.
- Evidence the candidate obtained and mounted a diagnostic cast.
- Evidence the candidate determined the complexity of the case based on ACP classifications.
- Evidence the patient was presented with treatment plan options and assessment of the prognosis, (e.g. complete dentures, partial denture, overdenture, implant options, FPD).
- Evidence the candidate analyzed the patient risks/benefits for the various treatment options.
- Evidence the candidate exercised critical thinking and made evidence based treatment decisions.

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

- Evidence the candidate developed a diagnosis and treatment plan for the removable prosthesis.
- Evidence the candidate obtained diagnostic casts.
- Evidence the candidate performed diagnostic wax-up/survey framework designs.
- Evidence the candidate performed an assessment to determine the need for pre-prosthetic surgery and made the necessary referral.
- Evidence the candidate performed tooth modifications and/or survey crowns, when indicated.
- Evidence the candidate obtained master impressions and casts.
- Evidence the candidate obtained occlusal records.
- Evidence the candidate performed a try-in and evaluated the trial dentures.
- Evidence the candidate inserted the prosthesis and provided the patient with post-insertion care.
- Documentation the candidate followed established standards of care in the restoration of the edentulous spaces, (e. g. informed consent, and infection control).

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

- Evidence the candidate developed a diagnosis and treatment plan that identified teeth that could be salvaged and or teeth that needed extraction.
- Evidence the candidate educated the patient regarding the healing process, denture experience, and future treatment need.
- Evidence the candidate developed prosthetic phases which included surgical plans.
- Evidence the candidate obtained casts (preliminary and final impressions).
- Evidence the candidate obtained the occlusal records.
- Evidence the candidate did try-ins and evaluated trial dentures.
- Evidence the candidate competently managed and coordinated the surgical phase.
- Evidence the candidate provided the patient post insertion care including adjustment, relines and patient counseling.
- Documentation the candidate followed established standards of care in the restoration of the edentulous spaces, (e. g. informed consent, and infection control).

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

- Evidence the candidate competently managed real or perceived patient problems.
- Evidence the candidate evaluated existing prosthesis.
- Evidence the candidate performed uncomplicated repairs, relines, re-base, re-set or re-do, if needed.
- Evidence the candidate made a determination if specialty referral was necessary.
- Evidence the candidate obtained impressions/records/information for laboratory use.
- Evidence the candidate competently communicated needed prosthetic procedure to laboratory technician.
- Evidence the candidate inserted the prosthesis and provided the patient follow-up care.
- Evidence the candidate performed in-office maintenance, (e.g. prosthesis cleaning, clasp tightening and occlusal adjustments).

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

- Complete laboratory prescriptions sent to the dental technician.
- Copies of all communications with the laboratory technicians.
- Evaluations of the laboratory work product, (e.g. frameworks, processed dentures).

Removable Prosthodontics scoring criteria

FACTOR 1: PATIENT EVALUATION AND DIAGNOSIS

5	4	3	2	1
• Evaluation and diagnosis is comprehensive and discriminating • Recognizes significant diagnostic implications of all findings	• Recognizes significant diagnostic implications but misses some findings that do NOT affect diagnosis	• Recognizes significant findings <u>but</u> there are errors in findings or judgment that do NOT compromise diagnosis	• Does NOT recognize significant findings or diagnostic implications • Diagnosis is jeopardized	• <u>Gross</u> errors in evaluation or judgment • <u>Gross</u> errors in diagnosis

FACTOR 2: TREATMENT PLAN AND SEQUENCING

5	4	3	2	1
• Presents/ formulates all treatment options and understands clinical nuances of each option • Presents comprehensive treatment plan based on clinical evidence, patient history and direct examination • Performs risk-based analysis to present appropriate treatment options and prognosis • Demonstrates critical thinking as evidenced in steps in treatment plan • No errors in planning and sequencing	• Presents/formulates most treatment options and understands rationale of each option • Treatment plan is appropriate some contributing factors NOT considered • Minor errors that do NOT affect planning and sequencing	• Presents/formulates appropriate treatment options with less than ideal understanding of chief complaint, diagnosis, and prognosis • Moderate errors that do NOT compromise planning and sequencing	• Does NOT address patient's chief complaint • Treatment plan NOT based on diagnosis • Major errors in evidenced based, critical thinking, risk-based, and prognostic assessment • Treatment sequence inappropriate	• Treatment plan NOT based on diagnostic findings or prognostic information • Treatment plan grossly inadequate • Treatment sequence grossly inappropriate

FACTOR 3: PRELIMINARY IMPRESSIONS

5	4	3	2	1
• Perform and recognize adequate capture of anatomy; free of distortions and voids	• Performs impression with minor errors that do NOT affect final outcome	• Performs impression with moderate errors that do NOT compromise final outcome	• Performs impression with major errors, or fails to recognize that final outcome is compromised	• Inadequate capture of anatomy or gross distortion/voids • Fails to recognize that subsequent steps are impossible

FACTOR 4: RPD DESIGN (IF APPLICABLE)

5	4	3	2	1
• Design demonstrates understanding of biomechanical and esthetic principles • Casts are surveyed accurately • Design is drawn with detail	• Design demonstrates understanding of biomechanical and esthetic principles with minor errors • Minor errors in cast survey and design	• Design is functional but includes rests, clasp assembly or major connector that are NOT first choices • Moderate errors in survey and design • Moderate errors in understanding of RPD design principles	• Demonstrates lack of understanding of biomechanical or esthetic principles • Major errors in cast survey and design	• Design is grossly inappropriate • Inaccurate survey • Illegible drawing

FACTOR 5: TOOTH MODIFICATION (IF APPLICABLE)

5	4	3	2	1
• Parallel guiding planes • Optimal size and location of rest preparations • Conservative recontouring of abutment teeth for optimal location of clasp and to optimize occlusal plane • Survey crowns as needed	• Minor deficiencies in tooth modification; RPD fit and service unaffected	• Moderate deficiencies in tooth modifications but no compromise in RPD fit and service	• Major errors in tooth modifications leading to compromised RPD fit and service • Tooth modifications may require restorations	• RPD abutment teeth are grossly over-prepared

FACTOR 6: BORDER MOLDING AND FINAL IMPRESSIONS

5	4	3	2	1
• Obtain optimal vestibular extension and peripheral seal • Perform and recognize adequate capture of anatomy • Impression free of distortions/voids	• Border molding and/or impression have minor errors that do NOT affect final outcome	• Border molding and/or impression have moderate deviations that do NOT compromise final outcome	• Border molding and/or impression have major errors that affect final outcome	• Border molding and/or impression do NOT adequately capture of anatomy or gross distortion/voids so that final outcome impossible

FACTOR 7: FRAMEWORK TRY-IN (IF APPLICABLE)

5	4	3	2	1
• Perform and recognize functional and occlusal adjustment • Complete seating of framework is achieved • Determine sequence for establishing denture-base support	• Minor deficiencies in ability to recognize and correct minor discrepancies in framework fit but do NOT affect RPD service	• Moderate deficiencies in ability to recognize or correct discrepancies in framework fit but no significant compromise to RPD service	• Major errors in framework fit NOT recognized • Errors in judgment regarding sequence of correction	• Gross errors in framework fit NOT recognized • Unable to determine sequence of correction

FACTOR 8: JAW RELATION RECORDS

5	4	3	2	1
• Smooth record bases with appropriate peripheral extensions/ thickness • Smoothly contoured wax rim establishes esthetic parameters • Vertical dimension is physiologically appropriate • Accurately captures centric relation • Relates opposing casts without interference	• Minor discrepancies in jaw relation records that do NOT adversely affect prosthetic service	• Moderate discrepancies in jaw relation records that do NOT compromise prosthetic service; records do NOT require repeating	• Major errors in jaw relation records that adversely affect prosthetic service; records should be redone	• Gross errors in jaw relation records with poor understanding and judgment; records should be redone

FACTOR 9: TRIAL DENTURES

5	4	3	2	1
• Recognizes optimal esthetic (midline, incisal length, tooth mold and shade, arrangement), occlusal (MIP=CR, VDO < VDR, bilateral posterior contact), speech and contour aspects of trial dentures • Deviations from the optimal are corrected or managed appropriately	• Minor deficiencies in ability to recognize and correct discrepancies in esthetics, vertical dimension, occlusion, phonetics and contour	• Moderate deficiencies in ability to recognize or correct discrepancies in esthetics, vertical dimension, occlusion and phonetics which do NOT compromise final outcome	• Major errors in ability to recognize or correct discrepancies in esthetics, vertical dimension, occlusion and phonetics which adversely affect final outcome	• Demonstrates inability to recognize or correct gross errors which will result in failure of final outcome

FACTOR 10: INSERTION OF REMOVABLE PROSTHESIS

5	4	3	2	1
• Optimize definitive prosthesis, recognizing errors and correcting if necessary, including the following: > Tissue fit > Prosthetic support, stability and retention > RPD extension base tissue support > Vestibular extension and bulk > Occlusion; clinical remount required > Phonetics > Contours and polish > Patient home care instructions	• Minor discrepancies in judgment and/or performance of optimizing prosthesis fit and function; no adverse effect on prosthesis service	• Moderate discrepancies in judgment and performance of optimizing prosthesis fit/function; no compromise on prosthesis service	• Major errors in judgment and performance of optimizing prosthesis fit/function • Prosthesis service adversely affected; may require significant correction of prosthesis	• Gross errors in judgment and performance results in failure of prosthesis with no possibility to correct; prosthesis must be redone

FACTOR 11: POST-INSERTION (1 WEEK)

5	4	3	2	1
• Perform an appropriate recall sequence to evaluate and diagnose prosthesis problem and make adjustments until patient is satisfied with fit, form and function of new prosthesis • Enroll patient in maintenance program • Demonstrate familiarity with common prosthesis complications and solutions	• Minor discrepancies in ability to evaluate and solve prosthesis problems; no effect on patient comfort and function	• Moderate discrepancies in ability to evaluate and solve prosthesis problems that do NOT compromise patient comfort and function	• Major errors in ability to evaluate and solve prosthesis problems that adversely affect patient comfort and function	• Gross errors in ability to evaluate and solve prosthesis problems • Patient confidence is compromised

FACTOR 12: LABORATORY SERVICES FOR PROSTHESIS

5	4	3	2	1
• Prescription clearly communicates desired laboratory work and materials • Complies with infection control protocols between clinic and laboratory environments • Accurately evaluates laboratory work products	• Prescription, or management of laboratory services has minor errors that do NOT adversely affect prosthesis	• Prescription, or management of laboratory services has moderate discrepancies that do NOT compromise prosthesis	• Prescription, or management of laboratory services, has major errors that adversely affect prosthesis	• Prescription, or management of laboratory services has gross errors that result in prosthesis failure

Chapter 10 - Endodontics

Purpose

The purpose of the competency examination for endodontics is designed to assess the candidate's independent ability to demonstrate clinical skills in all aspects of a case from diagnosis to completion of conventional nonsurgical endodontic interventions.

Clinical experiences

The documentation of endodontic clinical experiences on patients must include five (5) canals or any combination of canals in three separate teeth.

Overview

- Ten (10) scoring factors.
- One (1) clinical case.
- Requires patient management; therefore, candidate must be familiar with the patient's medical and dental history.
- Any treatment modifications must be consistent with the patient's medical history.

Patient parameters

- Any tooth to completion by the same candidate clinician on the same patient.
- Completed case means a tooth with an acceptable and durable coronal seal.

Scoring

Scoring points for endodontics are defined as follows:

- A score of 0 is unacceptable; candidate exhibits a critical error
- A score of 1 is unacceptable; major deviations that are correctable
- **A score of 2 is acceptable; minimum competence**
- A score of 3 is adequate; less than optimal
- A score of 4 is optimal

Elements of the Endodontics Portfolio

The Endodontics portfolio must include, but is not limited to the following:

a) Documentation the candidate applied case selection criteria for endodontic cases. The Portfolio must contain evidence the cases selected met American Association of Endodontics case criteria for minimum difficulty such that treated teeth have uncomplicated morphologies, have signs and symptoms of swelling and acute inflammation and have not had previously completed or initiated endodontic therapy.

- Candidate determines a diagnostic need for endodontic therapy.
- Candidate performs charting and diagnostic testing
- Candidate took and interpreted radiographs of the patient oral condition.
- Candidate made a pulpal diagnosis within approved parameters. Evidence the candidate considered the following in his/her determination the pulpal diagnosis was within approved parameters (within normal pulp, reversible pulpitis, irreversible pulpitis, necrotic pulp).
- Candidate makes a periapical diagnosis within approved parameters. Evidence the candidate considered the following in his/her determination the periapical diagnosis was within approved parameters (normal pulp, asymptomatic apical periodontitis, symptomatic apical periodontitis, acute apical abscess, and chronic apical abscess).
- Evidence the candidate developed an endodontic treatment plan that included trauma treatment, management of emergencies and referrals when appropriate. An appropriate treatment may include an emergency treatment due to a traumatic dental injury or for relief of pain or acute infection. The endodontic treatment may be done at a subsequent appointment.

b) Documentation the candidate performed pretreatment preparation for endodontic treatment. Documentation must include, but is not limited to the following:

- Evidence the candidate competently managed the patient's pain.
- Evidence the candidate removed caries and failed restorations.
- Evidence the candidate determined the tooth restorability.
- Evidence the candidate achieved isolation with a dental dam.

c) The candidate competently performed access opening. Documentation must include, but is not limited to the following:

- Evidence the candidate created the indicated outline form.
- Evidence the candidate created straight line access.
- Evidence the candidate maintained structural integrity.
- Evidence the candidate completed un-roofing of pulp chamber.
- Evidence the candidate identified all canal systems.

d) Documentation the candidate performed proper cleaning and shaping techniques. Documentation must include, but is not limited to the following:

- Evidence the candidate maintained canal integrity.
- Evidence the candidate preserved canal shape and flow.
- Evidence the candidate applied protocols for establishing working length.
- Evidence the candidate demonstrated apical control.
- Evidence the candidate applied disinfection protocols.

e) Documentation the candidate performed proper obturation protocols. Documentation must include, but is not limited to evidence the candidate applied obturation protocols, including selection and fitting of master cone, determination of canal condition before obturation, and verification of sealer consistency and adequacy of coating.

f) Documentation the candidate demonstrated proper length control of obturation, including achievement of dense obturation of filling material, obturation achieved to a clinically appropriate coronal height.

g) Documentation the candidate competently completed the endodontic case including evidence that the candidate achieved coronal seal to prevent re-contamination and the candidate created diagnostic, radiographic and narrative documentation.

h) Documentation the candidate provided recommendations for post-endodontic treatment, including evidence that the candidate recommended final restoration alternatives and provided the patient with recommendations for outcome assessment and follow-up.

Endodontics scoring criteria

FACTOR 1: PRETREATMENT CLINICAL TESTING AND RADIOGRAPHIC IMAGING

4	3	2	1	0
• Clinical tests and radiographic imaging completed and recorded accurately • Radiographic images are of diagnostic quality	• Clinical tests and radiographic imaging completed and recorded accurately with minor discrepancies	• Some clinical tests and radiographic images are lacking <u>but</u> diagnosis can be determined	• Some clinical tests and radiographic images are lacking <u>and</u> diagnosis is questionable	Critical errors <u>include</u>: • Clinical tests and radiographic images are lacking and diagnosis CANNOT be determined • Radiographic images are missing or are NOT of diagnostic quality

FACTOR 2: ENDODONTIC DIAGNOSIS

4	3	2	1	0
• Establishes correct pulpal and periapical diagnosis with accurate interpretation of clinical tests and radiographic images	• Establishes correct pulpal and periapical diagnosis with accurate interpretation, <u>but</u> missing <u>one</u> clinical test and/or radiographic image	• Establishes correct pulpal and periapical diagnosis with adequate interpretation, <u>but</u> missing <u>multiple</u> clinical tests and radiographic images that do NOT impact diagnosis	• Establishes inaccurate pulpal or periapical diagnosis, <u>and</u> missing <u>multiple</u> clinical tests and radiographic images that impact diagnosis	Critical errors <u>include</u>: • Demonstrates lack of understanding of endodontic diagnosis • No clinical tests were done

FACTOR 3: ENDODONTIC TREATMENT PLAN

4	3	2	1	0
• Prognosis of treatment outcomes determined • Comprehensive evaluation of medical and dental history • Selects appropriate treatments based on clinical evidence • Understands complexities of the case such that all treatment risks identified • Informed consent obtained including alternative treatments	• Prognosis of treatment outcomes determined and adequate evaluation of medical and dental history • Selects appropriate treatment(s) • Significant treatment risks identified • Informed consent obtained	• Prognosis of treatment outcomes determined and minimal evaluation of one of the following: > Medical or dental history > Appropriate treatment(s) selected, > Most treatment risks identified, >Informed consent obtained	• Prognosis of treatment outcomes unclear • Inadequate evaluation of medical and dental history despite appropriate treatments selected • Key treatment risks NOT identified	Critical errors include: • Demonstrates lack of evaluation of relevant medical and dental history • Inappropriate treatment planning • No treatment risks identified • No informed consent obtained • Demonstrates inappropriate case selection • Prognosis of treatment outcomes NOT determined

FACTOR 4: ANESTHESIA AND PAIN CONTROL

4	3	2	1	0
• Thorough knowledge of technique and materials used • Monitors vital signs and patient response throughout anesthesia • Anesthesia administration effective	• Thorough knowledge of technique • Profound anesthesia achieved • Monitors patient response throughout anesthesia	• Can proceed with treatment without faculty assistance • Adequate anesthesia achieved	• Elements of anesthesia or pain control absent but patient care NOT compromised	Critical errors include: • Incorrect anesthetic technique • Inadequate pain control and patient care is compromised • Requires faculty assistance

FACTOR 5: CARIES REMOVAL, REMOVAL OF FAILING RESTORATIONS, EVALUATION OF RESTORABILITY, SITE ISOLATION

4	3	2	1	0
• Complete removal of visible caries • Removal of failing restoration • Establishes complete structural restorability • Achieves complete isolation with dental dam	• No visible caries and failing restorations removed • Establishes significant aspects of structural restorability and achieves effective isolation with dental dam	• No visible caries present • Establishes likely restorability and achieves adequate isolation with dental dam	• Caries removal compromised that potentially impacts procedure • Compromised coronal seal	Critical errors include: • Gross visible caries • Failing restoration present • Nonrestorable excluding medical indications • Ineffective isolation

FACTOR 6: ACCESS OPENING

4	3	2	1	0
• Optimum outline and access form with no obstructions • All canals identified • Roof and pulp horns removed	• Slight underextension of outline form but walls smooth but all canals identified and roof and pulp horns removed	• Moderate under- or overextension of outline form, minor irregularities for wall smoothness but all canals identified and roof and pulp horns removed	• Crown integrity compromised by overextension but tooth remains restorable • All canals identified but minor roof and pulp horns remain	Critical errors include: • Tooth is NOT restorable after access procedure or perforation • Structural compromise • Canal(s) missed or unidentified

FACTOR 7: CANAL PREPARATION TECHNIQUE

4	3	2	1	0
• Optimum canal length determination and preparation within 0.5-1.0 mm of radiographic apex • Maintenance of original canal position and integrity	• Adequate canal length determination and preparation within 1.5 mm short of radiographic apex • Mild deviations of original canal shape	• Acceptable canal length determination and preparation within 2 mm short of working length • Moderate deviations of original canal shape	• Canal length and preparation shorter than original working length • Canal length > 2 mm short or 1 mm long of radiographic apex • Severe deviations of original canal shape but treatable • Separated instrument that does NOT prevent canal preparation	Critical errors include: • Working length determination > 2 mm short or long of radiographic apex • Sodium hypochlorite accident • Canal perforated or NOT treatable • Separated instrument preventing canal preparation

FACTOR 8: MASTER CONE FIT

4	3	2	1	0
• Optimum cone fit and length verified within 0.5-1.0 mm of radiographic apex • Maintenance of canal position and integrity as demonstrated in cone fit	• Adequate cone fit and length verified within 1.5 mm short of radiographic apex • Mild deviations of original canal shape	• Acceptable cone fit and length verified within 2 mm short radiographic apex • Moderate deviations of original canal shape • Achieves tugback before lateral obturation	• Cone length determination > 2 mm short or long from radiographic apex • Cone fit > 2 mm short or > 1 mm long of radiographic apex	Critical errors include: • Master cone too small or too large and/or cone fit >2 mm short or long of radiographic apex

FACTOR 9: OBTURATION TECHNIQUE

4	3	2	1	0
• Achieves dense fill within 0.5-1.0 mm short of radiographic apex • None or minor overextension of sealer • No solid core material overextended	• Achieves dense fill within the apical two-thirds and less than 1.5 mm short of radiographic apex • Less than 1 mm of sealer extruded	• Achieves dense fill in apical third without voids • Solid core material 1.5- 2.0 mm short or 1 mm long of radiographic apex • 1-2 mm of sealer extruded	• Apical third has slight to moderate voids • Solid core material 2-3 mm short or 1-2 mm long • More than 2 mm of sealer extruded	Critical errors include: • Solid core material greater than 3 mm short or greater than 2 mm long of radiographic apex and/or significant voids throughout fill

FACTOR 10: COMPLETION OF CASE

4	3	2	1	0
• Optimum coronal seal placed prior to permanent restoration • Optimum evidence of documentation; e.g., radiographs, clinical notes, assessment of outcomes • Evidence of comprehensive and inclusive post-operative instructions	• Effective coronal seal placed prior to permanent restoration • Thorough evidence of documentation; e.g., radiographs, clinical notes, assessment of outcomes and evidence of post-operative instructions	• Acceptable durable coronal seal placed • Acceptable documentation; e.g., radiographs, clinical notes, assessment of outcomes and evidence of post-operative instructions	• Acceptable coronal seal placed with limited longevity • Evidence of incomplete documentation • Evidence of incomplete post-operative instructions	Critical errors include: • Poor coronal seal • Prognosis likely impacted by iatrogenic treatment factors • Improper or no documentation • No evidence of post-operative instruction

Chapter 11 - Periodontics

Purpose

The competency examinations for periodontics are designed to assess the candidate's ability to demonstrate clinical skills in all aspects of a case from treatment planning to patient management.

Clinical experiences

The documentation of periodontal clinical experiences must include a minimum of twenty five (25) cases.
A periodontal experience must include, but is not limited to:

> An adult prophylaxis,
> Treatment of periodontal disease such as scaling and root planing,
> Any periodontal surgical procedure, and,
> Assisting on a periodontal surgical procedure when performed by a faculty or an advanced dental education candidate in periodontics

The combined clinical periodontal experience must include a minimum of five (5) quadrants of scaling and root planing procedures.

Overview

- Nine (9) scoring factors.
- One (1) case to be scored in three parts:
  - Part A. Review medical and dental history, radiographic findings, comprehensive periodontal data collection, evaluate periodontal etiology/risk factors, comprehensive periodontal diagnosis, treatment plan.
  - Part B. Calculus detection and effectiveness of calculus removal.
  - Part C. Periodontal re-evaluation.
- All three parts are to be performed on the same patient.
- In the event that the patient does not return for periodontal re-evaluation, Part C may be performed on a different patient.

Patient parameters

a) Examination, diagnosis and treatment planning

- Minimum twenty (20) natural teeth with at least 4 molars
- At least one probing depth of 5 mm or greater must be present on at least four (4) of the teeth, excluding third molars, with at least two of these teeth with clinical attachment loss of 2 mm or greater
- Full mouth assessment or examination
- No previous periodontal treatment at the dental school, and no nonsurgical or surgical treatment within past 6 months

b) Calculus detection and periodontal instrumentation (scaling and root planing)

- Minimum of six (6) natural teeth in one quadrant, with at least two (2) adjacent posterior teeth in contact, one of which must be a molar.
- Third molars can be used but they must be fully erupted
- At least one probing depth of 5 mm or greater must be present on at least two (2) of the teeth that require scaling and root planing.
- Minimum of six (6) surfaces of clinically demonstrable subgingival calculus must be present in one or two quadrants. Readily clinically demonstrable calculus is defined as easily explorer detectable, heavy ledges. At least four (4) surfaces of the subgingival calculus must be on posterior teeth. Each tooth is divided into four surfaces for qualifying calculus: mesial, distal, facial, and lingual.
  If additional teeth are needed to obtain the required calculus and pocket depths two quadrants may be used.

c) Re-evaluation

- Candidate must have a thorough knowledge of the case
- Candidate must perform at least two (2) quadrants of scaling and root planing on the patient being reevaluated
- Candidate must perform at least two documented oral hygiene care (OHC) instructions with the patient being reevaluated 4-6 weeks after scaling and root planing is completed. The scaling and root planing should have been completed within an interval of 6 weeks or less.
- Minimum twenty (20) natural teeth with at least four (4) molars
- Baseline probing depth of at least 5 mm on at least four (4) of the teeth, excluding third molars

Scoring

Scoring points for periodontics are defined as follows:

- A score of 0 is unacceptable; candidate exhibits a critical error
- A score of 1 is unacceptable; major deviations that are correctable
- **A score of 2 is acceptable; minimum competence**
- A score of 3 is adequate; less than optimal
- A score of 4 is optimal

Elements of the Periodontics Portfolio

a) Documentation the candidate performed a comprehensive periodontal examination. The comprehensive periodontal examination must include, but is not limited to the following:

(1) Evidence the candidate reviewed the patient's medical and dental history.
(2) Evidence the candidate evaluated the patient's radiographs.
(3) Evidence the candidate performed extra- and intra-oral examinations of the patient.
(4) Evidence the candidate performed comprehensive periodontal data collection.
- Evidence the candidate evaluated the patient's plaque index, probing depths, bleeding on probing, suppurations, cementoenamel junction to the gingival margin (CEJ-GM), clinical attachment, tooth mobility and furcations
- Evidence the candidate performed an occlusal assessment

b) Documentation the candidate diagnosed and developed a periodontal treatment plan. The documents must include:

(1) The candidate determined the periodontal diagnosis.
(2) The candidate formulated an initial periodontal treatment plan that demonstrated the candidate:

- Determined to treat or refer the patient.
- Discussed with patient the etiology, periodontal disease, benefits of treatment, consequences of no treatment, specific risk factors, and patient-specific oral hygiene instructions.
- Determined non-surgical periodontal therapy.
- Determined need for re-evaluation.
- Determined recall interval.

c) Documentation the candidate performed nonsurgical periodontal therapy. The documents must include:

(1) Detected supra- and subgingival calculus
(2) Performed periodontal instrumentation:
- Removed calculus
- Removed plaque
- Removed stains

(3) Demonstrated that the candidate did not inflict excessive soft tissue trauma
(4) Demonstrated that the candidate provided the patient with anesthesia

d) Documentation the candidate performed periodontal re-evaluation. The documents must include:

(1) Evidence the candidate evaluated effectiveness of oral hygiene
(2) Evidence the candidate assessed periodontal outcomes:
- Reviewed the medical and dental history
- Reviewed the patient's radiographs
- Performed comprehensive periodontal data collections (e. g. , evaluation of plaque index, probing depths, bleeding on probing, suppurations, cementoenamel junction to the gingival margin (CEJ-GM), clinical attachment level, furcations, and tooth mobility

(3) Evidence the candidate discussed with the patient his/her periodontal status as compared to the baseline, patient-specific oral hygiene instructions and modifications of specific risk factors
(4) Evidence the candidate determined further periodontal needs including the need for referral to a periodontist and periodontal surgery.
(5) Evidence the candidate established a recall interval for periodontal treatment.

Periodontics scoring criteria

FACTOR 1: REVIEW MEDICAL AND DENTAL HISTORY (Part A)

4	3	2	1	0
• Demonstrates complete knowledge and understanding of implications to dental care • Provides clear presentation of case	• Demonstrates complete understanding of implications to dental care <u>but</u> presentation could be improved	• Recognizes significant findings • Misses some information <u>but</u> minimal impact on patient care	• Recognizes medical conditions <u>but</u> fails to place in context of dental care • Unaware of medications or required precautions for dental appointment • Lack of information compromises patient care	Critical errors <u>include</u>: • Lacks current information • Endangers patient • Does NOT include vital signs • Leaves questions regarding medical or dental history unanswered • Does NOT identify need for medical consult

FACTOR 2: RADIOGRAPHIC FINDINGS (Part A)

4	3	2	1	0
• Identifies and interprets all radiographic findings	• Identifies and interprets significant radiographic findings	• Interprets radiographic findings with minor deviations that do NOT substantially alter treatment	• Misses significant radiographic findings	Critical errors <u>include</u>: • Grossly misinterprets radiographic findings • Fails to identify non-diagnostic radiographs • Presents with outdated radiographs

FACTOR 3: COMPREHENSIVE PERIODONTAL DATA COLLECTION (Part A - applies to one quadrant selected by examiner)

4	3	2	1	0
• Provides accurate assessment of all parameters in quadrant	• Deviations of pocket depth up to 1 mm • Correctly identifies all furcations • Correctly identifies all tooth mobility • Correctly identifies gingival recession • Correctly identifies areas with no attached gingiva	• Not more than one deviation of 2 mm or more in pocket depth • Correctly identifies Class II or III furcations involvement • Incorrectly identifies tooth mobility by one step in no more than one tooth • Over/underestimates gingival recession by ≤ 1 mm on any surface • Recognizes concept of clinical attachment level and differentiate from probing pocket depth	• More than one deviation of 2 mm or more in pocket depth • Fails to correctly identify Class II or III furcations involvement • Fails to identify areas with no attached gingiva • Overestimates Class 0 and 1 furcations • Over/underestimates tooth mobility by two steps on any tooth • Fails to correctly identify Grade 2 or 3 mobility • Over/underestimates gingival recession by more than 2 mm on any surface • Performs incomplete periodontal examination • Fails to recognize concept of clinical attachment level and differentiate from probing pocket depth	Critical errors include: • Performs periodontal examination which has no diagnostic value • Provides inaccurate assessment of key parameters

FACTOR 4: EVALUATE PERIODONTAL ETIOLOGY/RISK FACTORS (Part A)

4	3	2	1	0
• Identifies all systemic, local etiologic and risk factors	• Misses one risk factor	• Misses two risk factors but treatment is NOT substantially impacted	• Misses risk factors which compromise treatment planning and patient care	Critical errors include: • Fails to identify all risk factors

FACTOR 5: COMPREHENSIVE PERIODONTAL DIAGNOSIS (Part A)

4	3	2	1	0
• Provides accurate and complete diagnosis based on comprehensive clinical examination and findings • Demonstrates comprehensive understanding of periodontal diagnosis	• Provides accurate and complete diagnosis based on clinical examination and findings pertinent to the case	• Differentiates between periodontal health, gingivitis and periodontitis • Makes acceptable diagnosis with minimal deviations from ideal but treatment NOT impacted	• Fails to diagnose periodontitis • Makes diagnosis with critical deviations from optimal • Provides a diagnosis which lacks rationale	Critical errors include: • Fails to make a diagnosis • Provides diagnosis which is grossly incorrect

FACTOR 6: TREATMENT PLAN (Part A)

4	3	2	1	0
• Provides comprehensive and clinically appropriate treatment plan including clear description of etiology, benefits of treatment, alternatives, and risk factors	• Provides comprehensive and clinically appropriate treatment plan including clinically appropriate alternative treatment plan (if any) • Provides adequate description of risks and benefits of treatment and alternatives	• Provides clinically appropriate treatment plan but fails to address some factors that are unlikely to affect outcome • Does NOT provide clear description of risks and benefits of treatment and alternatives	• Provides treatment plan which fails to address relevant factors which are likely to affect outcome • Provides incomplete periodontal treatment plan that is below the standard of care and adversely affects outcome	Critical errors include: • Provides clinically inappropriate treatment plan which could harm the patient

FACTOR 7: CALCULUS DETECTION (Part B)

4	3	2	1	0
• Demonstrates complete detection of all subgingival calculus present in quadrant(s)	• Incorrectly identifies absence or presence of one area of clinically demonstrable subgingival calculus	• Incorrectly identifies absence or presence two areas of clinically demonstrable subgingival calculus	• Misses three areas of clinically demonstrable subgingival calculus	Critical errors include: • Misses or incorrectly identifies four or more areas of clinically demonstrable subgingival calculus

FACTOR 8: EFFECTIVENESS OF CALCULUS REMOVAL (Part B)

4	3	2	1	0
• Demonstrates complete removal of all calculus plaque and stains from tooth surfaces • Does NOT cause any tissue trauma • Does NOT cause any patient discomfort	• Demonstrates complete removal of all other deposits except for stains in pits and fissures • Minimizes patient discomfort	• Misses one area of clinically demonstrable subgingival calculus • Demonstrates removal of all other deposits but some remaining minor stains on accessible surfaces • Provides sufficient pain management for treatment	• Misses two areas of clinically demonstrable subgingival calculus • Causes major tissue trauma • Leaves moderate plaque and supragingival calculus • Inadequate pain management	Critical errors include: • Misses three areas of clinically demonstrable subgingival calculus • Leaves heavy stain, plaque, supragingival calculus • No pain management

FACTOR 9: PERIODONTAL RE-EVALUATION (Part C)

4	3	2	1	0
• Identifies all clinical changes of periodontal condition and describes the biological basis of changes • Evaluates patient's oral hygiene, provides patient-specific oral hygiene instruction, and educates patient on the significance of plaque removal and periodontal disease treatment • Evaluates and determines all of the patient's specific periodontal needs with detailed rationale for further periodontal procedures	• Identifies all clinical changes of periodontal condition • Evaluates and determines specific needs for periodontal care with rationale for further periodontal procedures • Accurately assesses all of patient's oral hygiene problems • Provides oral hygiene instructions that addresses all of patient's needs • Evaluates and determines all of the patient's specific periodontal needs without detailed rationale	• Identifies most clinical changes of periodontal condition but fails to identify minor changes • Accurately assesses most of patient's oral hygiene problems • Provides oral hygiene instructions that only address most of the patient's needs • Evaluates and determines general needs for periodontal care including recall intervals and referral, if indicated	• Fails to identify persistent signs and symptoms of periodontal disease • Fails to present an oral hygiene plan • Makes recommendation for further periodontal treatment that is inappropriate and demonstrates lack of understanding of patient's periodontal needs	Critical errors include: • Fails to recognize any clinical change in periodontal condition • Did NOT assess patient's oral hygiene care or needs • Has NOT evaluated and/or determined patient's periodontal needs • Fails to recognize need for referral

Chapter 12 – Checklist for submission of Portfolio to Dental Board of California

Complete the Application for Determination of Licensure Eligibility (Portfolio)

Complete the Law and Ethics Examination Eligibility

Pay fees for application and examination

Submit copy of LIVESCAN fingerprint form

Submit original scorecard of NBDE examination passing results

Complete Portfolio competency examinations

Make arrangements for completion of the letter from the Dean's office certifying good academic standing and graduation

Make arrangements with the school for the completed Portfolio to be sent to the Board.

Chapter 13 - Frequently Asked Questions

Q: Why did the Board decide to develop the Portfolio Examination alternative?

A: The Portfolio Examination is an initial licensure pathway that allows the Dental Board of California to delegate the administration of the clinical examination as legally mandated by the California State Business and Professions Code to the six (6) American Dental Association, Commission on Dental Accreditation (CODA) approved dental schools in California.

The Portfolio Examination offers candidates an option of completing a series of clinical competency examinations to be conducted during the clinical phase of dental education. The Portfolio clinical competency examinations will be administered under direct oversight by the Board and will utilize the psychometric (measurement) principles of standardization, calibration, and verification. After the examinations are completed and minimum clinical experiences are fulfilled, candidates will be granted a license to practice dentistry.

Currently, there are two pathways to initial dental licensure in California. One pathway is the clinical examination that is administered at the various dental schools within the state by WREB, a private examining group. A second pathway involves completion of a postdoctoral residency program in either Advanced Education in General Dentistry (AEGD) or General Practice Residency (GPR).

Q: How does this alternative compare to the other options for obtaining initial dental licensure?

A:

Portfolio Examination	Licensure by WREB	Licensure by Residency
Portfolio Competency examination completed with patients of record during your final year of dental school.	Must pass WREB examination.	Must complete a one year general practice residency (GPR)or advanced education in general residency program (AEGD)
Application/Examination fee of $350.00.	Application fee of $100.00 plus cost of WREB examination.	Application fee of $100.00 plus cost of residency program of 1 year.
Must complete the California Law and Ethics written examination.	Must complete the California Law and Ethics written examination.	Must complete the California Law and Ethics written examination.
Must complete the National Board Dental Examination.	Must complete the National Board Dental Examination.	Must complete the National Board Dental Examination.

Q: How was the Portfolio Examination developed?

A: The Portfolio Examination has been developed by dental school faculty of the six Board approved dental schools under the guidance of psychometric (measurement) consultants and in accordance with psychometric standards.

The Portfolio Examination consists of sequential candidate evaluation and passing a competency examination performed on patients of record in each of the following areas:

a) Oral Diagnosis and Treatment Planning
b) Direct Restoration
c) Indirect Restoration
d) Removable Prosthodontics
e) Endodontics
f) Periodontics

The six (6) competency examinations of the Portfolio Examination process will be evaluated by dental school faculty who have been calibrated according to grading criteria set forth by the Board.

Q: How were the minimum clinical experiences determined?

A: All six (6) dental schools agreed to minimum clinical experiences that their candidates will achieve to enable them to submit their Portfolio Examination to the Board.

These minimum clinical experiences are common requirements, and are within the individual school requirements for graduation. Consequently, a candidate will still need to meet all academic requirements for that dental school for graduation, allowing for academic autonomy of individual dental schools.

The competency components of the Portfolio Examination may be taken prior to completion of clinical experiences at the discretion of the dental school in which the candidate is enrolled.

Q: What procedures are in place for Board oversight?

A: In order to ensure public safety, the Board will maintain oversight of the process with dentist consultants contracted to the Board. Moreover, the Board will continue to maintain authority over this process and perform periodic audits of Portfolio competency examination results at each school.

Q: Why not use Objective Structured Clinical Examinations (OSCE) for maximum standardization?

A: The schools and the Board chose to have candidates provide services to actual patients rather than manikins so that they are confident that candidates can provide services in actual clinical settings during the normal course of treatment. For example, candidates would be performing procedures and understand the consequences of their procedures on actual tissue and structures rather than cadaver teeth and artificial tissue.

Q: What are the advantages of the Portfolio Examination?

A: First, the Portfolio Examination costs a fraction of what it costs to participate in other pathways to licensure (WREB, postdoctoral residency programs).

Second, the candidate can perform the required competency components throughout their dental school tenure utilizing normal standards of patient care while insuring patient protection in the process.

Third, the procedures are performed on patients of record at the individual dental schools, ensuring that follow-up care can be obtained if necessary for those involved with this process. The pressure of acquiring patients is alleviated, as the competency components can be performed at any time during the final year of dental school. This allows for public protection and safety, minimizing the potential exposure of the patient involved in the current “snapshot” examination process.

Q: What is different about the Portfolio competency examinations compared with my school’s competency examinations?

A: The Portfolio Examination is much broader based and is standardized across schools. The Portfolio requires minimum clinical experiences in six domains plus successful completion of standardized competency examinations in six subject areas to be performed on patients of record during the normal course of treatment: Oral Diagnosis and Treatment Planning, Direct Restoration, Indirect Restoration, Removable Prosthodontics, Endodontics and Periodontics. All procedures require an “on demand” level of acceptable clinical performance.

Q: What if I decide that the Portfolio Examination pathway is not for me?

A: If you choose not to participate in the Portfolio pathway, you can still acquire your license by taking the WREB or participating in a postdoctoral residency program in general dentistry (GPR or AEGD).

Q. Do I have to complete the minimum number of clinical experiences before attempting a Portfolio competency examination?

A. You can take a Portfolio competency examination once clinical faculty has approved your readiness for the examination regardless of the number of clinical experiences you have completed.

Q. When can I begin taking the Portfolio competency examinations?

A. You can begin taking Portfolio competency examinations as soon as your Clinic Director determines your readiness. Most students will take their Portfolio competency examinations in their final year of dental school; however, students may take them earlier at the discretion of the Clinic Director.

Q. Can the registrar of my dental school certify that I will graduate on my application?

A. No, only the Dean of your dental school can certify that you will graduate and are in good standing.

Q. How soon will I know the results of a given Portfolio competency examination?

A. Your results should be given immediately following completion of a Portfolio competency examination.

Q. What should I do if I fail a Portfolio competency examination?

A. You will need to make arrangements with the Portfolio competency examiner to retest. If you have failed a Portfolio competency examination three times, you will need to complete remedial education before retesting.

Q. Who will submit the completed Portfolio Examination after I have completed my minimum clinical experiences and Portfolio competency examinations?

A. Your dental school will submit the completed portfolio. You will need to verify with your school that your application is on file with the Board or submit your application and fee with the Portfolio.

Q. What if I decide that the Portfolio Examination pathway is not for me?

A. If a candidate chooses not to utilize the Portfolio pathway, he/she can still acquire their license by taking WREB or completing a postdoctoral residency program.

Q. Can my application fee be refunded if I decide that I no longer want to participate in the Portfolio pathway?

A. Application fees are non-refundable and cannot be transferred to another licensure pathway.