

The National Board Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE)

ADEA Allied Dental Program Directors' Conference
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Portland, Oregon

Overview

- The Joint Commission on National Dental Examinations (JCNDE)
- Existing Evidence for Clinical Examinations
- OSCEs and the DLOSCE Approach
- DHLOSCE Development
- Additional Information and Resources

The JCNDE is a Commission of the ADA

Commissions are agencies of the ADA that have been granted independent authority to carry out their program and duties.

- Philosophical foundation of Commissions:
 - Must be consistent, free from bias and conflict of interest, and objective.
 - No single community of interest can have undue influence in the decision-making process, including the ADA.
 - Quality assurance is necessary to protect the public and assure long-term viability of the profession.
 - Integrity, confidentiality, due process.
- Subject to the *ADA Constitution & Bylaws* and *ADA Governance and Organizational Manual* and governed by the *Rules of the JCNDE* and the *Operational and Policy Manual* of the JCNDE.

The JCNDE

Mission

Protecting public health through valid, reliable and fair assessments of knowledge, skills, and abilities to inform decisions that help ensure safe and effective patient care by qualified oral healthcare team members.

Vision

The JCNDE is the nation's leading resource for supporting standards of oral healthcare professionals through valid, reliable and fair assessments for licensure and certification.

JCNDE Commission



Dr. Michael Sanders
Chair



Dr. John D. Da Silva
Vice-Chair



Ms. Joanna Allaire



Dr. Anthony E Herro



Dr. Rachel Hogan



Ms. Han-Na Jang



Dr. Michael E. King



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Dr. Douglas C. Wilson



Dr. Mark Zajkowski



Mr. Tommy Lau
(Observer)



Dr. Gary D. Oyster
(ADA BOT Liaison)

Commissioners are dental and/or dental hygiene board members, educators, practitioners, students, and/or members of the public.

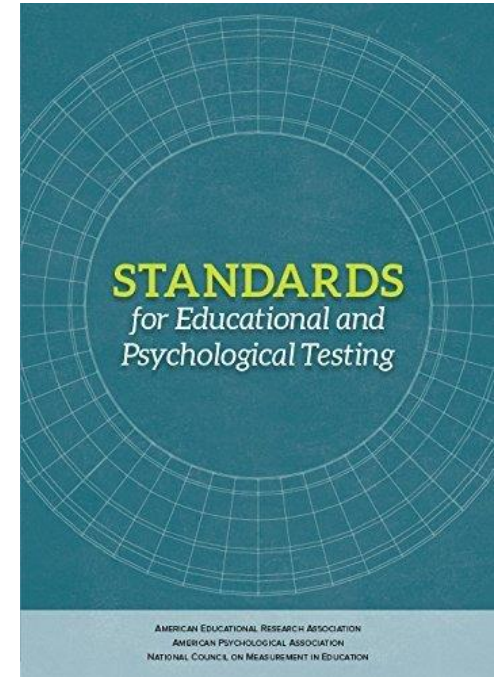
JCNDE Examination Programs

The JCNDE oversees the following licensure examination programs:

- **NBDE Part II** - National Board Dental Examination Part II (sunsets 2022)
- **INBDE** - Integrated National Board Dental Examination
- **NBDHE** - National Board Dental Hygiene Examination
- **DLOSCE** - Dental Licensure Objective Structured Clinical Examination
- **DHLOSCE** - Dental Hygiene Licensure Objective Structured Clinical Examination

Professional Standards

- The *Standards* were developed by the American Educational Research Association (AERA), American Psychological Association (APA), and the National Council on Measurement in Education (NCME).
- The *Standards* provide considerations for developing and implementing valid examinations.
- The *Standards* and industry best practices guide the design, construction, scoring, and reporting of examinations implemented by the JCNDE and the Department of Testing Services (DTS).



Existing Evidence for Clinical Examinations

- Subject to substantial random error (unreliable).
- Virtually everyone passes in the end ... and if a candidate does fail, they can simply try again.
- Results fail to accurately reflect candidate skills (validity, fairness).
- Prevent qualified candidates from obtaining a license.
- Lack sufficient validity evidence to support their usage.
- Fail to protect the public.

“There is no peer-reviewed scientific evidence that correlates [clinical licensure examination] outcomes with other validated assessments of clinical competence ... the process yields no verifiable value in its ultimate objective of providing for the protection of the public.”

Friedrichsen, S.W. (2016). Moving toward 21st-century clinical licensure examinations in dentistry. *Journal of Dental Education*, 80(6), 639-640.

Why OSCEs?

- OSCEs represent a method of measurement that is commonly used to assess clinical competence; success requires critical thinking. They are widely used in the health sciences.
- Benefits include:
 - Assesses broad range of skills, including clinical and theoretical knowledge
 - Standardized (competencies, tasks)
 - Strong validity evidence
 - Reliable
 - Fair

Why the DLOSCE?

- Gives boards the ability to identify those who lack the skills necessary for safe practice, using a professionally developed examination backed by strong validity evidence.
- Eliminates undesirable situations and complications that can arise from the use of patients in the examination process.
- Allows for more objective and comprehensive measurement of candidate skills.
- **Helps boards in their mission to protect the public.**

DLOSCE Approach

- Assesses understanding of clinical tasks performed in chairside treatment.
- Assesses quality, depth, and breadth of clinical judgment.
- Assesses higher order processes.
- Provides a professionally developed, psychometrically valid tool.
 - ❑ *Content built by teams of highly qualified and dedicated subject-matter experts (150+ test constructors), who are in clinical practice and/or academia*
 - ❑ *Questions selected primarily by general practitioners to ensure clinical relevance*
- Builds upon well-established understanding of OSCEs.
 - ❑ *Widely used in health sciences; National Dental Examining Board (NDEB) of Canada has considerable supportive data and peer-reviewed findings*

DLOSCE Content

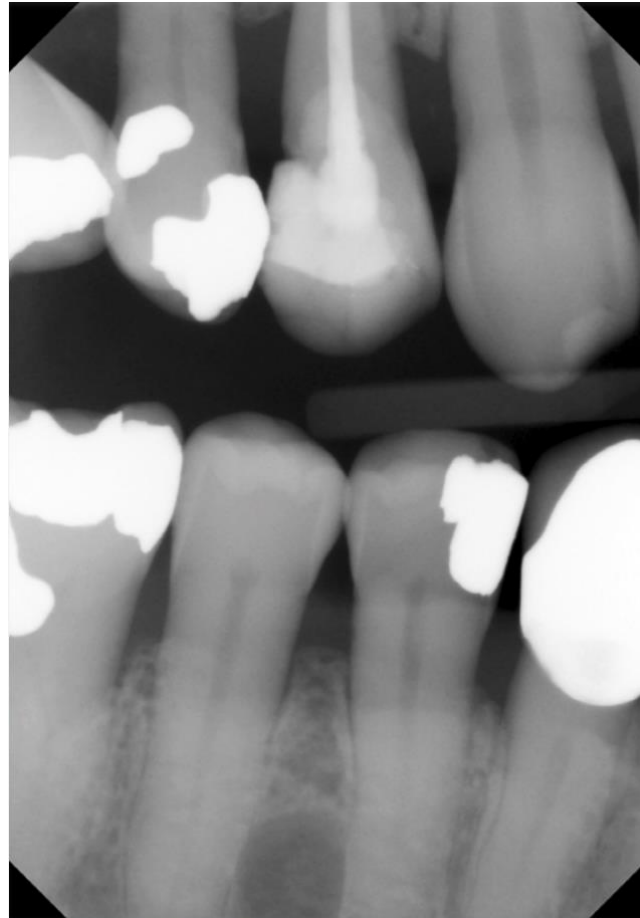
The DLOSCE includes questions involving a broad scope of practice with patients of various conditions and backgrounds, including pediatric, geriatric, special needs, and medically complex patients.

DLOSCE questions are modeled on clinical situations. Diagnosis, treatment planning, and occlusion, are covered across the topics below:

- Restorative Dentistry (24%)
- Prosthodontics (19%)
- Oral Pathology, Pain Management, and TMD (13%)
- Periodontics (10%)
- Oral Surgery (9%)
- Endodontics (8%)
- Orthodontics (6%)
- Medical Emergencies (6%)
- Prescriptions (5%)

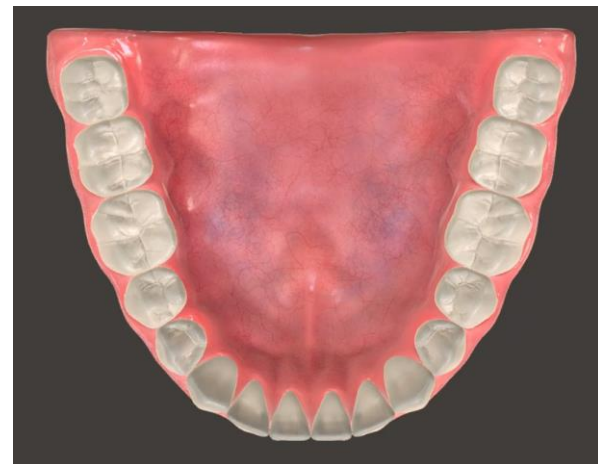
Example of Multiple-Choice, Multiple-Response Question

Patient
Female, 56 years old
Chief Complaint
"I have a bump on my gums"
Background and/or Patient History
Current Findings
Swelling in the lower right premolar area



See next slide.

DLOSCE 3-Dimensional Models



Question Responses

Depending on the question type, each possible response is evaluated as follows:

- **Correct.** This represents a **correct clinical judgment** based on the available information. Depending on the question, candidates can receive either full credit (1 point) or partial credit for a given correct response, as long as they avoided choosing any incorrect responses for the question.
- **Clinical Judgment Error/Incorrect:** This represents a **clinical judgment error**. Selecting this response causes the candidate to receive no credit (0 points) for this question, even if a correct response was also selected.
- **Unscored/Neutral:** This represents an **indeterminate situation**. These are situations—identified by dental subject matter experts—where given the available information a candidate’s choice of this response is considered neither correct nor incorrect.

Example of Multiple-Choice, Multiple-Response Question

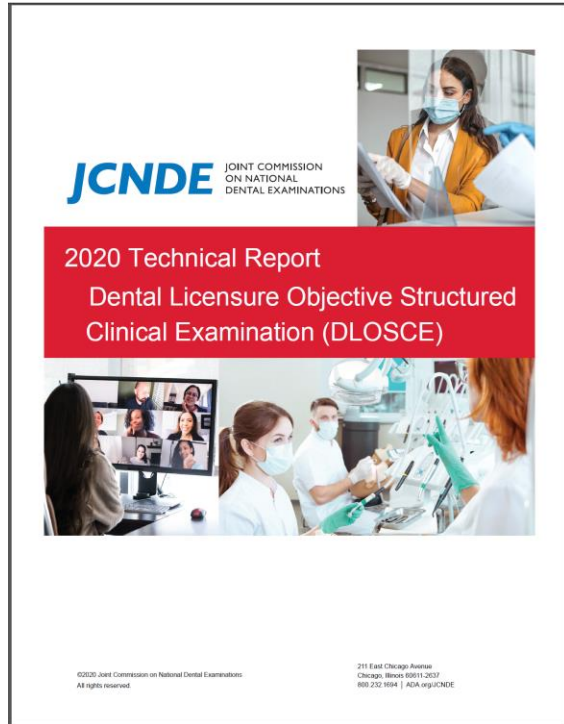
Select **ONE OR MORE** correct answers. Any **INCORRECT** selections will result in your earning **NO CREDIT** for this question.

Which should be included in a differential diagnosis?

- A. Normal anatomical variant
- B. Radiographic artifact
- C. Cyst or benign tumor
- D. Malignant tumor
- E. Odontogenic inflammatory condition
- F. Non-odontogenic inflammatory condition
- G. Reactive lesion (simple bone cyst, giant cell lesions)
- H. Fibro-osseous lesion
- I. Traumatic lesion/fracture
- J. Developmental condition
- K. Manifestation of systemic disease

Correct: C (partial credit, 0.5 points) and E (partial credit, 0.5 points)
Unscored/Neutral: G, H, and K
Clinical Judgment Error/Incorrect: Selecting any response other than a “Correct” or “Unscored/Neutral” response causes the candidate to receive no credit (0 points) for this question, even if a Correct response was also selected.
Content Classification: Oral Pathology, Pain Management, and Temporomandibular Dysfunction

DLOSCE Technical Report



- DLOSCE Technical Report available on website (ada.org/dlosce).
- Documents DLOSCE psychometric properties and validity evidence.
- Includes expanded discussion of DLOSCE content and the question of psychomotor skill evaluation.

Acceptance by Dental Boards

The states below have adopted regulations which permit the acceptance of the DLOSCE. In some states, passage of the DLOSCE only partially fulfills the clinical examination requirement for licensure*.

Dental boards in a number of additional states have expressed interest in learning more about the examination.

- Alaska*
- Colorado
- Indiana
- Iowa*
- Oregon
- Washington

The Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE)

DHLSOCE Development

Updates and improvements involving examination content areas.

- Development and implementation of an **updated, comprehensive practice analysis** for dental hygiene [Under development, occurring in 2022 and 2023]
- Updates to the **NBDHE test specifications** (i.e., percentages of items assigned to topic areas), based on the updated practice analysis [proposed implementation date in 2025]

Improvements to scoring/results precision, the candidate experience, and test security.

- Implementation of the **3PL scoring model** for the NBDHE, to more precisely evaluate candidate skills. Note: while results precision will improve, this change is not anticipated to change the candidate experience. [Proposed for 2025]
- Implementation of an **updated NBDHE performance standard** [Under discussion, proposed for 2025]
- Designing and implementing a framework for **multi-stage adaptive testing** for the NBDHE [Under discussion, proposed for 2026]

Designing, constructing, and successfully implementing the DHLOSCE.

- Proposed launch at the end of 2024

DHLOSCE Development

In June 2021 the JCNDE approved a business plan to develop a Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE).

The DHLOSCE will:

- give boards the ability to identify those who lack the clinical skills necessary for safe dental hygiene practice, using a professionally developed examination backed by strong validity evidence.
- eliminate undesirable situations and complications that can occur from the use of patients in the examination process.
- allows for more objective, fair, and comprehensive measurement of candidate skills.
- **help boards in their mission to protect the public.**

DHLOSCE Proposed Timeframes

Year	Core Task(s)
2021	Establish Steering Committee and working committees
2022	Build core examination content
2023	Develop items and supplemental materials (3D models, stimulus materials, etc.); Conduct focused field testing (e.g., on samples of key examination components)
2024	Launch examination and follow-up

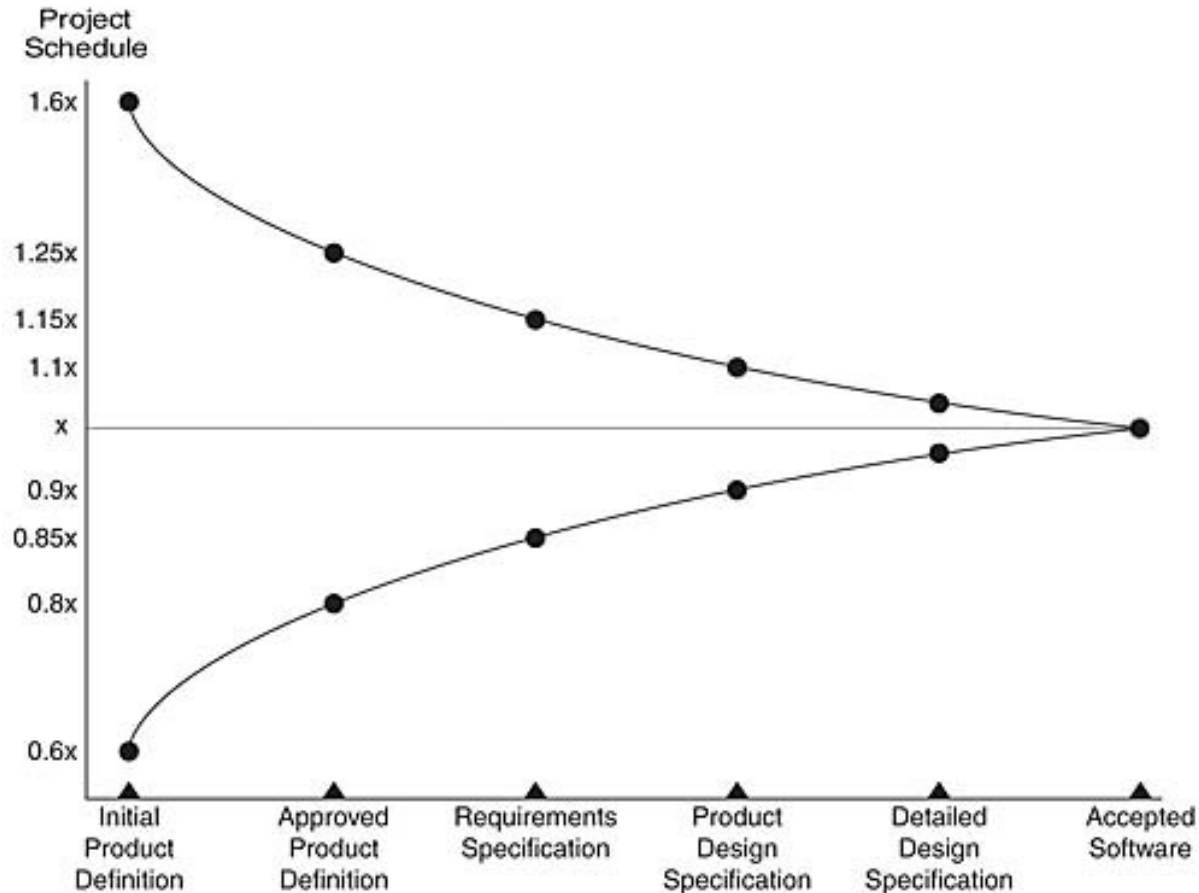
DHLOSCE Activities

- The JCNDE's DHLOSCE Steering Committee held its inaugural meeting in January 2022.
- The Committee discussed its charge and made decisions laying the groundwork for content development activities to begin, with the understanding that the DHLOSCE content framework would be refined over time.
- Updates will be posted on the JCNDE's DHLOSCE website (www.ada.org/dhlosce).

Twelve Steps for Test Development (Downing, 2006)

1. Planning	7. Test Administration
2. Content Definition	8. Test Scoring
3. Test Specifications	9. Standard Setting
4. Item Development	10. Reporting Test Results
5. Test Design and Assembly	11. Item Banking
6. Test Production	12. Technical Reports / Validation

The Cone of Uncertainty



- Downloaded from <https://medium.com/@williamchambers/using-the-cone-of-uncertainty-in-discovery-fb4d07da00c>

How Can You Help Promote the DHLOSCE?

Development of the DHLOSCE is a historic event. How can you play a role in making history?

- Help build a consensus with **dental hygiene programs**, in support of the DHLOSCE.
- Help build a consensus within your **state dental and dental hygiene associations**, in support of these examinations.
- Advocate for acceptance of these examinations with your **state dental/dental hygiene board**. Request that your board accept the DHLOSCE as complete fulfillment of boards' clinical licensure examination requirement.
- Consider joining the Coalition for Modernizing Dental Licensure
 - Web: www.dentallicensure.org Email: info@dentallicensure.org

DHLOSCE Resources

Available Now	Future
Webpage (ada.org/dhlosce)	Practice Questions
3D Model Tutorial (ada.org/dlosce)	Candidate Guide
FAQs	Technical Report
Recorded Webinars	Summary of Content Validity Evidence
	Quick Facts

Thank you!

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