

# Update on the Dental Hygiene Examinations of the JCNDE

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Director, JCNDE

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# Overview

- The Joint Commission on National Dental Examinations (JCNDE)
- The Department of Testing Services (DTS)
- Ongoing and upcoming strategic initiatives
- Validity, reliability, & high stakes licensure testing
- The National Board Dental Hygiene Examination (NBDHE)
- The Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE)
- Q & A

# The Purpose of the JCNDE

- The JCNDE provides information to dental and dental hygiene boards to inform licensure decisions concerning dental and dental hygiene candidates.
  - Boards have the critical task of using this information to understand whether a candidate has the skills necessary to safely practice.
  - The actions of boards are vital to the oral health and general health of the public.
- The JCNDE oversees the following licensure examination programs:
  - National Board Dental Hygiene Examination (NBDHE)
  - Integrated National Board Dental Examination (INBDE)
  - Dental Licensure Objective Structured Clinical Examination (DLOSCE)
  - Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE) (*in development*)

# Joint Commission-ADA *Bylaws* Duties

- a. Provide and conduct examinations for all purposes, including assisting state boards of dentistry and dental examiners in exercising their authority to determine qualifications of dentists and other oral health care professionals seeking certification and/or licensure to practice in any state or other jurisdiction of the United States.
- b. Make rules and regulations for the conduct of examinations and the certification of successful candidates.
- c. Serve as a resource for dentists and other oral health care professionals concerning the development of examinations.
- d. Provide a means for a candidate to appeal an adverse decision of the Commission.
- e. Submit an annual report to the House of Delegates of this Association and interim reports, on request.
- f. Submit an annual budget to the Board of Trustees of the Association.

# JCNDE Strategic Direction

## **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 leading resource for the valid, reliable and fair assessment of oral health professionals.

# Composition of the JCNDE

Appointing Organizations	Number of Members	Term Lengths (in years)
<b>Voting Members</b>		
AADB	6	4
ADEA	3	4
ADA	3	4
ADHA	2	4
ASDA	1	1
Public	1	4
<b>Non-voting Members</b>		
ASDA Observer	1	1*
ADA BOT Liaison	1	1

\*The ASDA Observer transitions to a Commissioner role in their second year.

# Appointing Organizations and Current Appointees

<b>AADB (6)</b>	<b>Anthony E. Herro, DDS (JCNDE Chair)</b> Julie W. McKee, DMD Jeetendra Patel, DDS (Open Position) (Open Position) (Open Position)
<b>ADA (3)</b>	M. Reza Iranmanesh, DMD, MSD, PA Frank E. Schiano, DMD, FAGD, MScD Ronald Waryjas, DDS
<b>ADEA (3)</b>	Sara Gordon, DDS Rachel Hogan, DMD, M.Ed. Peter Loomer, B.Sc., DDS, Ph.D., MRCD(C), FACD ( <b>JCNDE Vice-Chair</b> )
<b>ADHA (2)</b>	Han-Na Jang, RDH, MSDH Tami Grzesikowski, RDH, MEd
<b>ASDA (1)</b>	Chris Elkhall, DMD
<b>Public (1)</b>	James R. Sherrard, PhD
<b>Liaisons &amp; Observers</b>	Tareina Rogers, MS (ASDA Observer) Allen Reavis, DDS (ADA Board Liaison) Liaisons and observers do not participate in voting

# The JCNDE



**Dr. Anthony E Herro**  
Chair



**Dr. Peter M. Loomer**  
Vice-Chair



**Dr. Christopher Elkhali**  
(ASDA Student  
Commissioner)



**Dr. Sara Gordon**



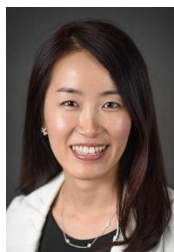
**Tami Grzesikowski**



**Dr. Rachel Hogan**



**Dr. M. Reza Iranmanesh**



**Ms. Han-Na Jang**



**Dr. Julie W. McKee**



**Dr. Jeetendra Patel**



**Dr. Frank Schiano**



**Dr. James R. Sherrard**



**Dr. Ronald J. Waryjas**



**Dr. Allen Reavis**  
(ADA BOT Liaison)



**Tareina Rogers**  
(ASDA Observer)

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

# Key Points

- The composition of the JCNDE reflects the important perspectives that must be considered in the construction and implementation of dental and dental hygiene examinations, with particular emphasis given to boards.
- The JCNDE operates “at arms length” from the ADA and other appointing associations, pursuing its *Bylaws* duties.
- The JCNDE has a long track record of helping boards identify those who are not qualified to safely practice.
- The JCNDE monitors administrations through internal procedures and close collaboration with key vendors (Prometric and Pearson VUE)
- The JCNDE monitors examination and examinee performance closely and regularly, and reviews examination policy on an ongoing basis to address any issues that arise.
- The JCNDE updates examination content and programs to ensure clinical relevance and to help ensure consistent, accurate identification of those who do not possess the skills necessary to safely practice.

# The Department of Testing Services (DTS)

## DTS Development

Test Development	Dental Content and Media Development	Research & Development - Psychometrics	New Psychometric Development & Innovations
Conducts Test Construction Team (TCT) meetings for seven operational examination programs (80+ meetings annually) and new programs under development.	Develops, reviews, and manages dental content and media assets for examination programs (3D models, illustrations, radiographs, clinical photographs, clinical simulations, Patient Boxes).	Oversees analysis and scoring of examinations (45,000+), professional investigations, and technical publications in support of examination programs	Provides psychometric support in the development of new examination programs.

## DTS Operations

Test Administration	Test Security and Fraud Prevention	Project Management and Operations	Communications	Volunteer and Meetings
<p>Manages application processing, results report requests, and test vendor administrations (45,000+)</p> <p>Interacts with candidates, academic programs, administration and faculty via phone calls, live chats, emails, faxes (nearly 70,000 annually)</p>	<p>Monitors test security policies, procedures, irregularities and candidate appeals; risk assessment.</p> <p>Manages testing accommodation requests. Resolves testing day problems.</p>	<p>Project management and services to outside clients.</p>	<p>Manages communications for stakeholders and communities of interest.</p>	<p>Manages volunteer activities and meeting logistics for TCT and governance meetings.</p>

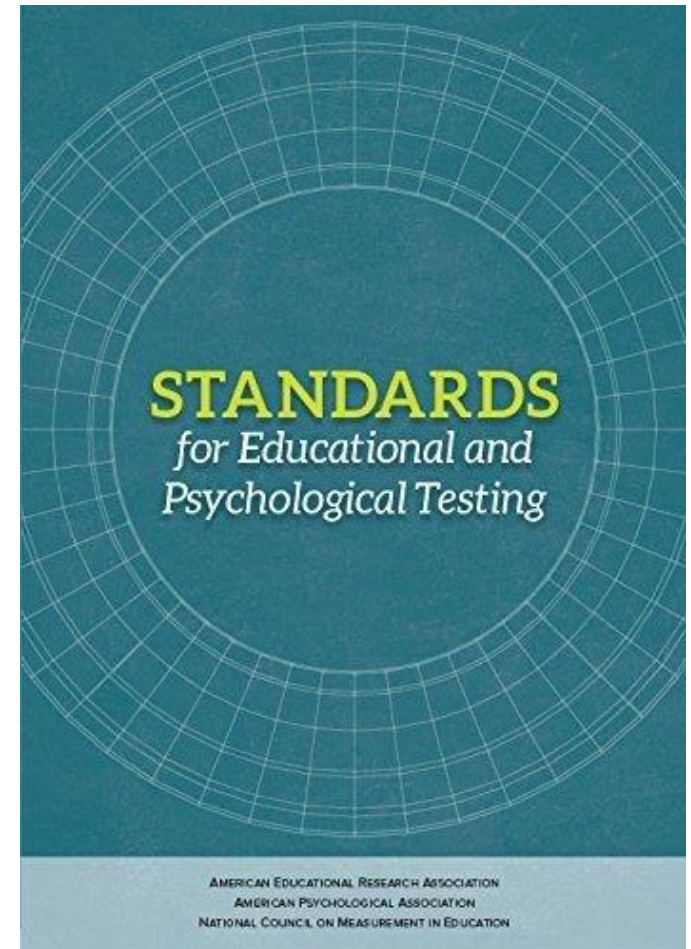
# Governing Bodies and Testing Programs

DTS implements high-stakes licensure and admissions testing programs under the purview of the following governing bodies:

Joint Commission on National Dental Examinations (JCNDE)	Council on Dental Education and Licensure (CDEL)
<ul style="list-style-type: none"><li>Integrated National Board Dental Examination (INBDE)</li><li>National Board Dental Hygiene Examination (NBDHE)</li><li>Dental Licensure Objective Structured Clinical Examination (DLOSCE)</li><li>Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE) <i>(in development)</i></li></ul>	<ul style="list-style-type: none"><li>Dental Admission Test (DAT)</li><li>Advanced Dental Admission Test (ADAT)</li><li>Admission Test for Dental Hygiene (ATDH)</li></ul>
Outside Clients	
<ul style="list-style-type: none"><li>Optometry Admission Test (OAT)</li><li>Canadian Dental Aptitude Test (CDAT)</li><li>Additional clients</li></ul>	

# 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* and industry best practices guide the design, construction, scoring, and reporting of examinations implemented by the Department of Testing Services (DTS).
- The *Standards* provide considerations for developing and implementing valid, reliable, and fair examinations.



# Ongoing and Upcoming Strategic Initiatives

# DHLOSCE and DLOSCE

- The DHLOSCE and DLOSCE are now board-approved options in fulfillment of clinical dental hygiene and dental licensure requirements (respectively) in the following additional states:

**Arizona**

**Kentucky**

- The JCNDE appreciates the opportunity to serve boards in service to the public health.

# Ongoing and Upcoming Strategic Initiatives

The JCNDE reports major decisions on its website: [jcnde.ada.org/](https://jcnde.ada.org/)



**Unofficial Report of Major Actions**  
**Psychometric Research & Examination**  
**Content Development Meeting of the**  
**Joint Commission on National Dental Examinations**  
**May 17, 2024**

The Joint Commission on National Dental Examinations (JCNDE) met on Friday, May 17, 2024 for its annual Psychometric Research & Examination Content Development meeting and took the following actions:

1. Established a new performance standard for the INBDE, with implementation of the new standard to occur as soon as logistically feasible. The new performance standard was identified through a structured and rigorous process involving a standard setting review panel composed of a diverse and representative group of subject matter experts who thoroughly scrutinizing INBDE content to identify the level of performance required for safe practice.

The INBDE is a valid, reliable, and fair examination that is used to help inform licensure decisions that help protect the safety of the public. Candidates are encouraged to be well-prepared before attempting this rigorous examination.

2. Further strengthened the JCNDE's National Board Examinations from a fairness perspective, by formally adopting the Fairness and Sensitivity Review process that was successfully piloted in 2023. This process involves convening a separate group of Fairness and Sensitivity Reviewers to review examination content specifically from a fairness perspective. This is in addition to efforts test constructors already take to help ensure the fairness of National Board Examination content.



**Unofficial Report of Major Actions**  
**Joint Commission on National Dental Examinations**  
**Governance, Policies, & Administration (GPA) Meeting**  
**June 26, 2024**

The Joint Commission on National Dental Examinations (JCNDE) met on Wednesday, June 26, 2024 for its annual Governance, Policies, & Administration (GPA) Meeting and took the following actions:

1. Announced the acceptance of the Dental Licensure Objective Structured Clinical Examination (DLOSCE) and Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE) as board-approved options in fulfillment of clinical dental and dental hygiene licensure requirements (respectively) in the following additional states:
  - Arizona
  - KentuckyThe JCNDE appreciates the opportunity to serve boards in service to the public health.
2. Adopted examination program policies for the DHLOSCE, which will be launched in March of 2025 in time for the 2025 dental hygiene licensure cycle. The DHLOSCE Candidate Guide will be published online during the third quarter of 2024.
3. Reaffirmed the JCNDE's long-term commitment to the DLOSCE and DHLOSCE through adoption of resolutions to help the JCNDE better promote these examinations and support advocacy efforts. The JCNDE's OSCEs are cutting edge examinations that are consistent with the JCNDE's *Mission* to help protect the public health through valid, reliable and fair assessments of knowledge, skills, and abilities to inform decisions that

# Dental Hygiene Examinations: Strategic Initiatives and Roadmap

- Updates and improvements involving examination content areas
  - Development and implementation of an **updated, comprehensive practice analysis** for dental hygiene to inform NBDHE and DHLOSCE development [2024].
  - Updates to **DHLOSCE test specifications** (i.e., topic outline and percentages of items assigned to topic areas) [2024].
  - Review of **NBDHE test specifications** by NBDHE Test Specification Review Panel [2024], with corresponding review and approval by the JCNDE [2025]. Full implementation of changes [2026].
- Improvements to the precision of test results, the candidate experience, and test security
  - Implementation of the **3PL scoring model** for the NBDHE, to more precisely evaluate candidate skills [2026]. Note: while results precision will improve, this change is not anticipated to change the candidate experience.
  - Implementation of an **updated NBDHE performance standard** [2026]
  - Designing and implementing a framework for **multi-stage adaptive testing** for the NBDHE [TBD, anticipated 2027]
- Designing, constructing, and successfully implementing the Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE)
  - Launch in Q4 2025

## Additional Updates and Initiatives

- The JCNDE reaffirmed its long-term commitment to the DLOSCE and DHLOSCE.
- The JCNDE further strengthened its National Board Examinations from a fairness perspective by incorporating an additional Fairness and Sensitivity Review process that was successfully piloted in 2023.
- The above is in addition to efforts test constructors already take to help ensure the fairness of National Board Examination content.
- Appointed new JCNDE Test Constructors and reappointed currently serving Test Constructors in support of the examination programs of the JCNDE.
- The JCNDE expresses its heartfelt thanks to Test Constructors for their exceptional work.
  - Interested in contributing to the National Board Examinations? Consider becoming a JCNDE Test Constructor! Learn more at <https://www.ada.org/education/testing/volunteer-test-constructor>

# Additional Resources

The JCNDE makes numerous resources available to communities of interest through its website: [jcnde.ada.org](https://jcnde.ada.org)

- Candidate Guides
- Technical Reports
- Sample Questions
- Sample 3D model (DLOSCE)
- Unofficial Reports of Major Actions
- Recorded Webinars
- List of recent and forthcoming updates to examinations

# Joint Commission-ADA *Bylaws* Duties

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# Validity, Reliability, & High Stakes Examinations

# Core Concepts from a Validity Perspective

- Tests are constructed for a specific, well-defined purpose:
  - Does the individual possess the level of skills necessary for safe practice? (Licensure)
  - To what degree does the individual possess the pre-requisite level of knowledge, skills, abilities, and other characteristics required to succeed in an educational program? (Admissions)
- Test results are interpreted in light of the test's purpose.
- Validity focuses on the available evidence to support the use of a test for its intended purpose.
- The accumulated evidence is referred to as the validity argument.

# Core Concepts from a Reliability Perspective

- Reliability generally refers to the consistency, stability, and precision of test scores.
- There are many different ways to think about reliability and agreement.
  - If the candidate were to test on the same form again, would they perform similarly?
  - If the candidate were to test on a different test form, would they get the same result?
  - If the candidate's performance is categorized (e.g., pass/fail), what is the likelihood of obtaining the same result?
  - If one were to split the test in half (for example), would the different halves yield the same result?
  - To what degree do the ratings from different subject matter experts correspond and agree?
  - How precise are test scores? How much error is present?
- Reliability is impacted by factors such as the number of questions or ratings, the quality of those questions and/or ratings, how calibrated those raters are with regard to a scoring rubric, etc.

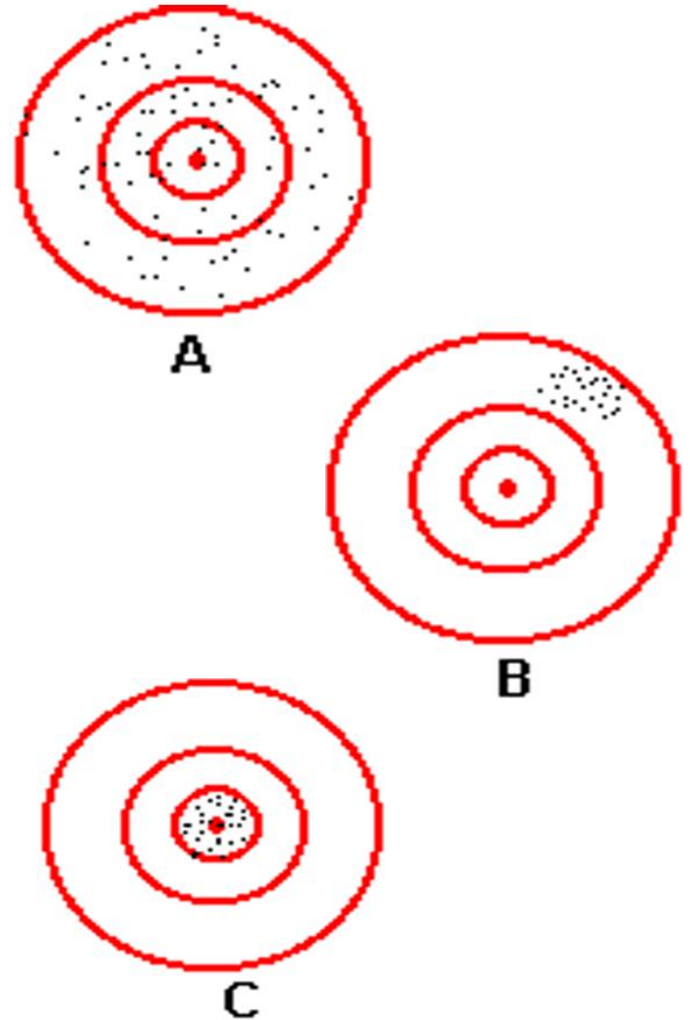
# Validity, Reliability, and Fairness

- Consistent and stable measurement must be present for a test to be useful in achieving its intended purpose.
- In short, tests must be reliable in order for them to be valid.
- Reliability sets the upper limit for validity.\*
- Reliability is not the endgame. In some situations a test publisher might choose to make sacrifices in reliability, to increase validity!
- Fairness is also critical to validity. If a test is not fair, it weakens the validity argument.
  - Note: Bias can actually increase reliability. This is obviously undesirable.
- For maximum validity, tests should avoid measuring things that are unrelated to candidate skills in the targeted area.

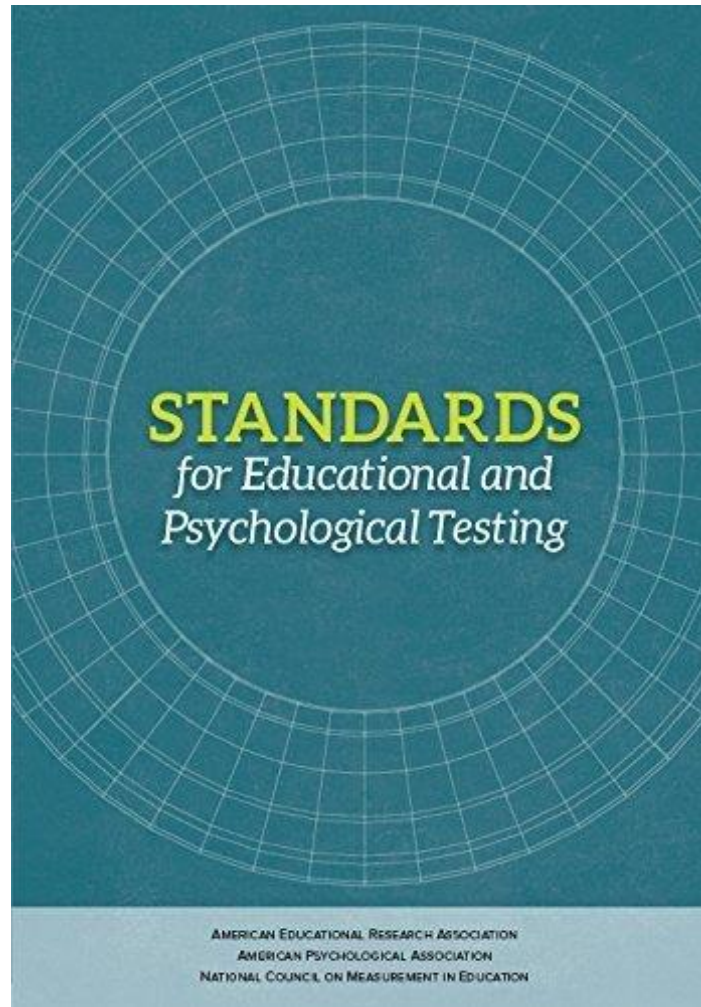
\* Technically, the square root of reliability sets the upper limit for validity.

# Validity, Reliability, and Bias

- Target A: No reliability, no validity
- Target B: Bias. High reliability does not equal high validity
- We want unbiased tests with both high reliability and strong validity



# Professional Standards



Publicly available: <https://www.testingstandards.net/open-access-files.html>

# What types of Validity evidence are relevant?

- The *Standards* note the following forms of validity evidence:
  - Content-oriented evidence
  - Cognitive processes
  - Internal test structure
  - Relationships with conceptually related constructs
  - Relationships with criteria
  - Consequences of tests

Note: **Face validity** does not appear on this list.

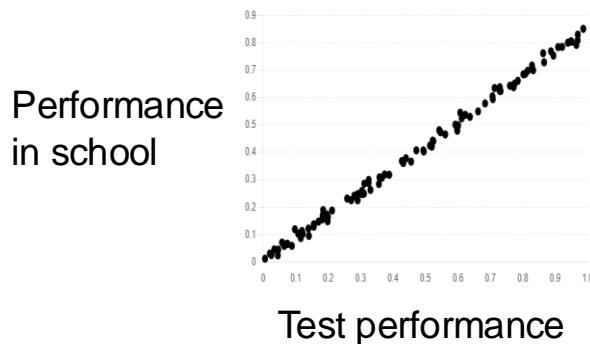
Note: **Examination failures rates** in isolation are not a form of validity evidence. Neither are pictures of damaged real and/or plastic teeth.

# How is relationship-based evidence interpreted?

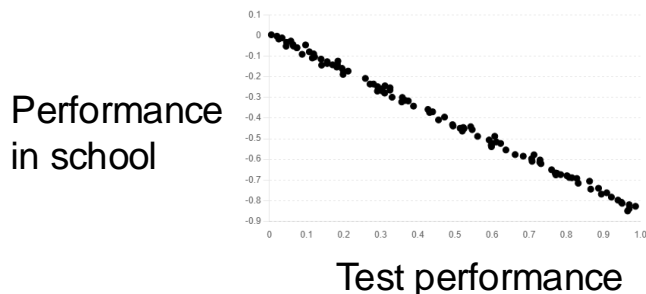
- With regard to relationships, we look at:
  - magnitude (size of the relationship)
  - direction (positive or negative)
- Measures of the same thing should be highly related (convergent validity)
  - *Test scores involving two different tests of reading comprehension.*
- Performance on a task that requires the skill measured by the test (criterion-related validity). Task performance and test performance should be highly related.
  - *Performance on a dental hygiene skills test and performance in professional dental hygiene or performance in dental hygiene school.*

# How is relationship-based evidence interpreted?

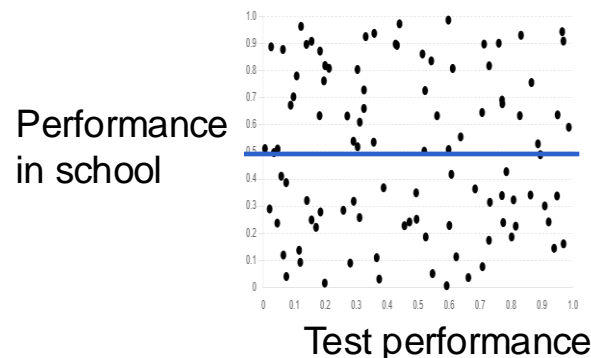
1. As one variable increases, the other increases (**positive** relationship)



2. As one variable decreases, the other decreases (**negative** relationship)



3. Changes in one variable are **unrelated** to changes in another variable (coin flip)



Interpreting Correlations	
.00	Zero (coin flip)
1.0	Perfect positive
-1.0	Perfect negative
General Guidelines*	
.10	Small
.30	Medium
.50	Large

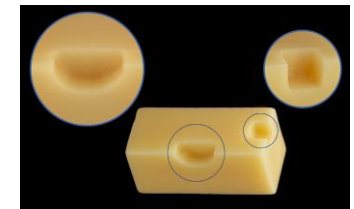
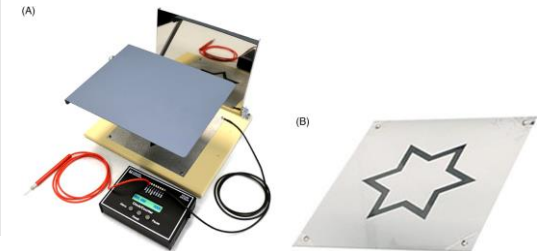
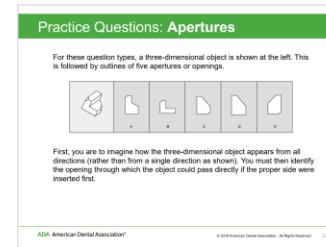
Cohen, 1988

# A Recent Published Example

- Imbery et al. (2023) studied the relationship between 1<sup>st</sup> year preclinical dental laboratory courses (restorative dentistry and dental anatomy) and performance on the following:
  - The Perceptual Ability Test (PAT) (a subtest of the DAT)
  - Mirror tracing test (measure of hand-eye coordination where direct vision is obscured)
  - The Operation game
  - Wax carving exercise

	Dental anatomy	Restorative dentistry
PAT	<b>0.41</b>	0.18
Mirror tracing		
Less time	<b>0.25</b>	<b>0.31</b>
Less errors	0.12	<b>0.31</b>
Operation game		
Less time	<b>0.21</b>	<b>0.34</b>
Less errors	0.10	<b>0.31</b>
Wax carving	<b>0.34</b>	<b>0.49</b>

Note: Values in bold are statistically significantly different from 0 at the 0.05 confidence level.



Imbery, T. A., Malone, C. J., Alhaddad, A. S., Goolsby, S. R., Janus, C., Baechle, M. A., & Carrico, C. K. (2023). Investigating correlations between the PAT and three hand-skill exercises to performance in preclinical laboratory courses. *Journal of dental education*, 87(7), 1008-1015. <https://doi.org/10.1002/jdd.13202>

# The National Board Dental Hygiene Examination (NBDHE)

# What is the purpose and intended use of the NBDHE?

- The NBDHE is designed to answer the following question:  
*Does the candidate possess the level of knowledge and cognitive skills required to safely practice dental hygiene?*
- The NBDHE is used by dental and dental hygiene boards to understand the qualifications of individuals who seek licensure to practice dental hygiene in the U.S.

# What content is assessed by the NBDHE?

## **Discipline-Based Component (200 items)**

- Scientific Basis for Dental Hygiene Practice (61 items)
- Provision of Clinical Dental Hygiene Services (115 items)
- Community Health/Research Principles (24 items)

## **Case Based Items (150 items)**

- Assessing patient characteristics
- Obtaining and interpreting radiographs
- Planning and managing dental hygiene care
- Performing periodontal procedures
- Using preventive agents
- Providing supportive treatment service
- Professional responsibility

Detailed NBDHE test specifications are available in the NBDHE Candidate Guide on [jcnde.ada.org/nbdhe](https://jcnde.ada.org/nbdhe)

# NBDHE Core Facts

- The NBDHE contains 350 questions and requires 9 hours to administer.
- Administrations occur at Pearson VUE testing centers located throughout the US and Canada.
- The 2024 NBDHE fee is \$565.
  - This fee includes official results reporting to the candidate, three licensing jurisdictions (provided result report requests are requested at the time of application), and the candidate's dental hygiene program (if CODA accredited).
- Examination regulations are strictly enforced, with corresponding penalties for rule violations (e.g., mandatory wait periods).
- Irregularity handling and appeal procedures are described in the NBDHE candidate guide, and mirror those present for other examinations of the JCNDE.

# NBDHE Administration Schedule

NBDHE ADMINISTRATION SCHEDULE		
Optional Tutorial		15 minutes
Session One	Discipline-based Items (100 items)	3 hours 30 minutes (plus 15-minute scheduled break)  Please note: the 3 hours and 30 minutes is for all 200 questions in session one and the time will continue after the optional break
	Scheduled Break (optional)	
	Discipline-based Items (100 items)	
Scheduled Break (optional)		30 minutes
Session Two:	7-8 Patient Cases (approximately 75 items)	4 hours (plus 15-minute scheduled break)  Please note: the 4 hours is for all of the patient cases in session two and the timer will continue after the optional break
	Scheduled Break (optional)	
	7-8 Patient Cases (approximately 75 items)	
Post-examination Survey (optional)		15 minutes
Total Time		9 hours

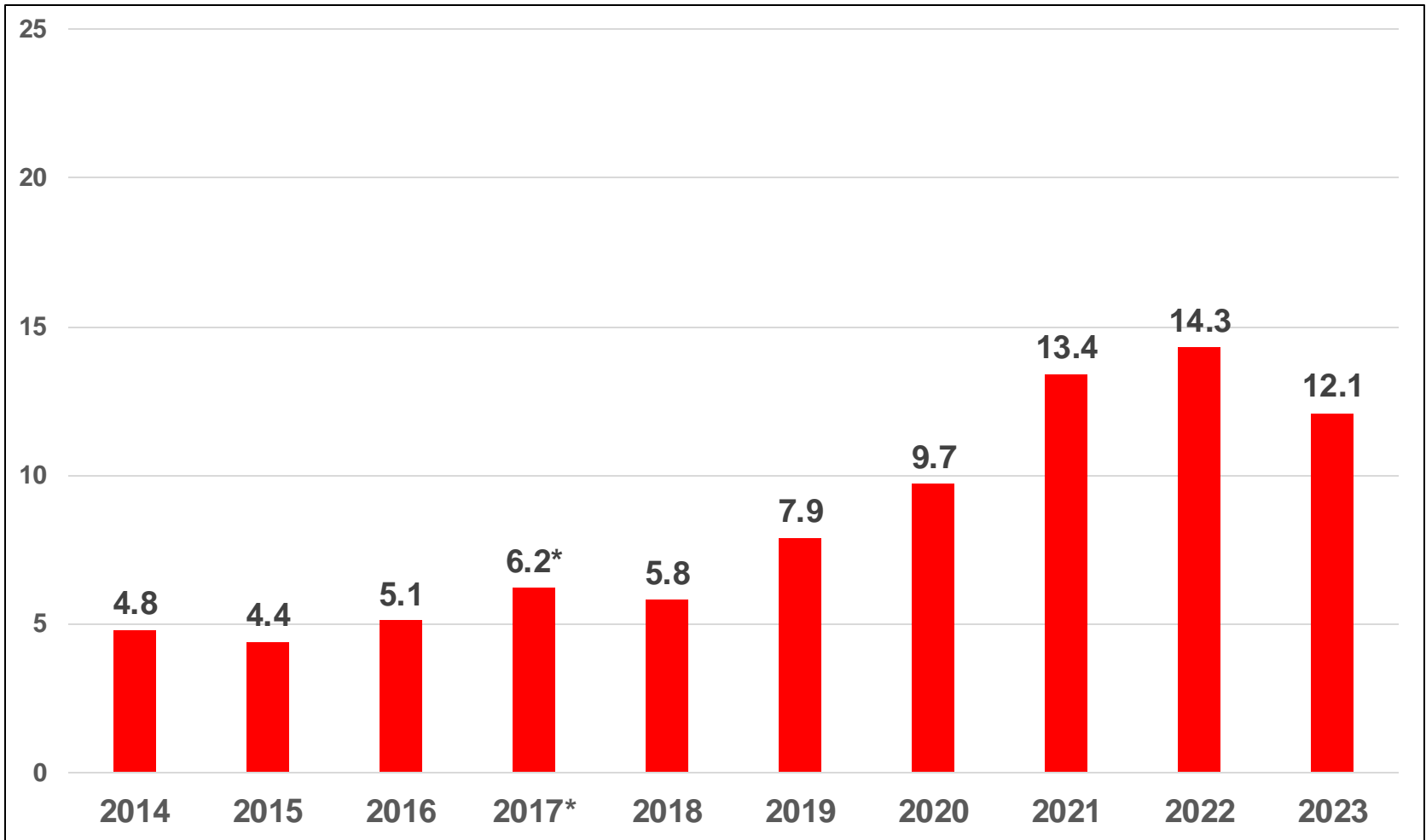
# NBDHE Retest Policy

- Candidates must wait a minimum of **60 days** between each unsuccessful NBDHE attempt, with a maximum of four (4) such administrations permitted during any one-year period. The preceding restrictions are not subject to appeal.
- Under the JCNDE's Five Years/Five Attempts Eligibility Rule, candidates must pass the examination within a) five years of their first attempt or b) five examination attempts, whichever comes first. Subsequent to the fifth year or fifth attempt, candidates may test once every 12 months after their most recent examination attempt.
- The Five Years/Five Attempts Eligibility Rule applies to examination attempts occurring on or after January 1, 2012. Examination attempts occurring prior to this date are not considered under this regulation.

# NBDHE Results Reporting

- **Candidate Results:** NBDHE results are reported as Pass/Fail
  - Candidates who pass simply receive notification they have passed.
  - For remediation purposes, candidates who fail are provided with information concerning their overall performance, and their performance in the thirteen (13) discipline areas, and for the case area.
- **School Results:** Candidate pass/fail status, monthly reports, and annual reports are all reported to dental hygiene programs through the DTS Hub.
  - Monthly and annual reports describe how a school performed on the NBDHE relative to other schools.
- **State Board Results.** Candidate pass/fail status is reported to dental and dental hygiene boards through the DTS Hub.
  - The DTS Hub indicates whether a candidate has passed the NBDHE.

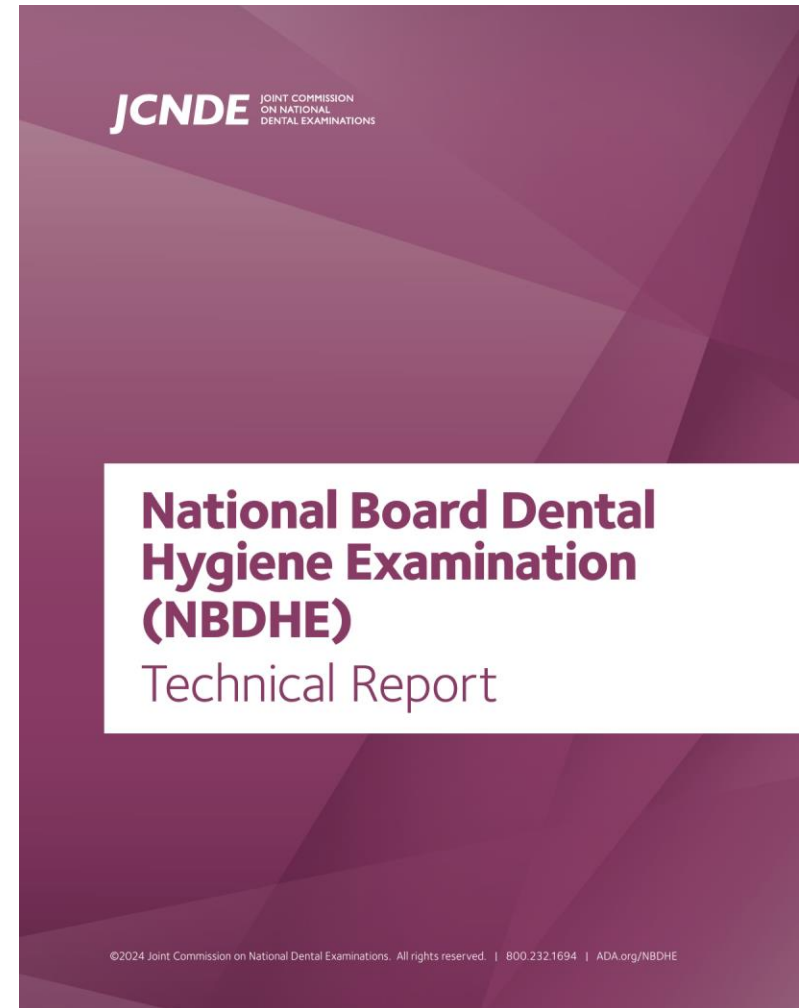
# NBDHE Failure Rates (%)



\* A new standard was introduced this year, based on updated standard setting activities.

# NBDHE Technical Report

- Extensive technical documentation for the NBDHE is provided in the NBDHE Technical Report, which is available at [jcnde.ada.org/](https://jcnde.ada.org/)
  - Validity evidence
  - Failure rates



# The Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE)

# The Dental Hygiene Licensure Objective Structured Clinical Examination

- The DHLOSCE is currently in development.
- 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 arise from the use of patients in the examination process.
  - allow for more objective, fair, and comprehensive measurement of candidate skills.
  - **help boards in their mission to protect the public.**

# 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

# DHLOSCE Test Content: Two Major Areas

## 1. Assessment, Interpretation, Evaluation, and Reevaluation (45%)

The Assessment, Interpretation, Evaluation, and Reevaluation topic covers the extraoral and intraoral examination conducted by a dental hygienist. This includes hard and soft tissue evaluation (including the periodontal examination), as well as the interpretation of information concerning medical, dental, and psychosocial history and the patient's oral health condition (e.g., via radiographic imaging). The latter includes the reevaluation that occurs after treatment. These findings are interpreted by the dental hygienist in accordance with their scope of practice and are used to inform the dental hygiene diagnosis.

- 1.1 Medical, Dental, and Psychosocial History\*
- 1.2 Soft Tissue Evaluation (15%)
- 1.3 Hard Tissue Evaluation (15%)
- 1.4 Periodontal Assessment (35%)
- 1.5 Hard and Soft Deposits (20%)
- 1.6 Radiographic Technique\*\* (15%)

\*Measured throughout the examination in every representation of a patient.

\*\*Radiographic Technique focuses on the effective use of radiographic equipment as a means of obtaining diagnostic-quality radiographs (e.g., recognizing factors that impact the diagnostic quality of a radiograph and identifying adjustments that could be made to improve the quality). It does NOT include the interpretation of radiographic images for the purpose of establishing the dental hygiene diagnosis. The latter is covered in other areas of these examination content specifications.

# DHLOSCE Test Content: Two Major Areas

## **2. Dental Hygiene Care Planning and Evidence Based Treatment (55%)**

The Dental Hygiene Care Planning and Evidence Based Treatment topic covers the utilization of information acquired during Assessment, Interpretation, Evaluation, and Reevaluation to formulate appropriate dental hygiene care plans – incorporating patient considerations, risk factors, and anticipated outcomes – to inform the provision of dental hygiene treatment (including instrumentation) and follow-up treatment. The preceding also includes efforts to manage patient anxiety through pain control, as well as the management of medical emergencies that may occur during treatment. The aforementioned activities all occur in accordance with the dental hygienist's scope of practice.

2.1 Infection Control (10%)

2.2 Dental Hygiene Care Planning (25%)

2.3 Pain Control (15%)

2.4 Nonsurgical Periodontal Therapy and Adjunctive Therapy (40%)

2.5 Medical Emergencies (10%)

# DHLOSCE Test Content: Patient Considerations

## Patient Considerations Assessed throughout the DHLOSCE

- Oral and facial abnormalities (congenital or acquired)
- Pregnant or nursing
- Cardiovascular disease
- Respiratory disease
- Autoimmune disease
- Cancer
- Gastrointestinal disorders
- Feeding and eating disorders
- Substance related disorders (e.g., nicotine, alcohol, cannabis, prescription and non-prescription drugs)
- Neurological disorders (not including stroke)
- Stroke
- Neurodevelopmental disorders
- Mental health disorders
- Orthodontic
- Physical disabilities
- Prosthetic joint and/or limb
- Dental prosthesis and implants
- Endocrine conditions (not including diabetes mellitus)
- Diabetes mellitus
- Blood disorders
- Sleep disorders
- Infectious diseases
- Organ transplants

Documentation is implicitly assessed in all relevant content areas, through candidate responses.

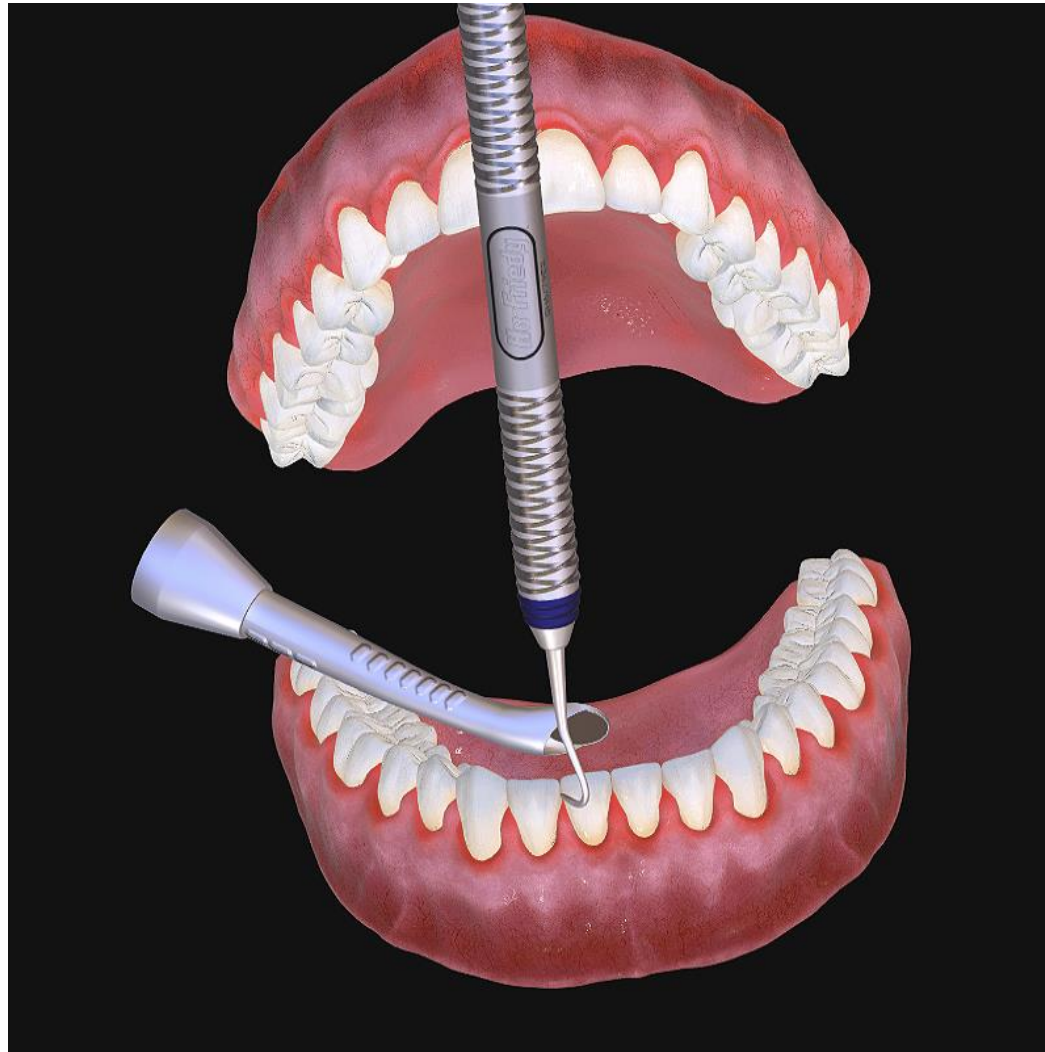
# DHLOSCE Core Facts

- The DHLOSCE contains 150 total questions. These questions assess **clinical judgment** and are modeled on clinical dental hygiene situations.
- DHLOSCE questions take into account the many considerations and options that are available to a dental hygienist when they are evaluating a patient's condition and determining what actions to take.
- Most questions on the DHLOSCE utilize an innovative multiple-choice format, where the candidate may be asked to:
  - choose the single correct response
  - choose one or more correct responses
- Many questions involve partial credit scoring, with the candidate needing to avoid critical errors to avoid losing any obtained credit for the question.

# DHLOSCE Core Facts (continued)

- All DHLOSCE questions reference a patient. Questions are therefore accompanied by information concerning that patient, including reference materials such as the following:
  - **Patient Box.** The Patient Box provides patient demographic information (age, biological sex), the chief complaint, background/history, and current findings.
  - **Clinical photographs.** Photographs of patient conditions.
  - **Radiographs.** Radiographic images of patients' teeth.
  - **Animated 3-D Models.** Animated 3D models, with the candidate permitted to zoom, magnify, etc. so they can observe the clinical techniques applied and answer the question posed.

# DHLOSCE Test Content: Animated 3D Models



# DHLOSCE Test Content: Animated 3D Models



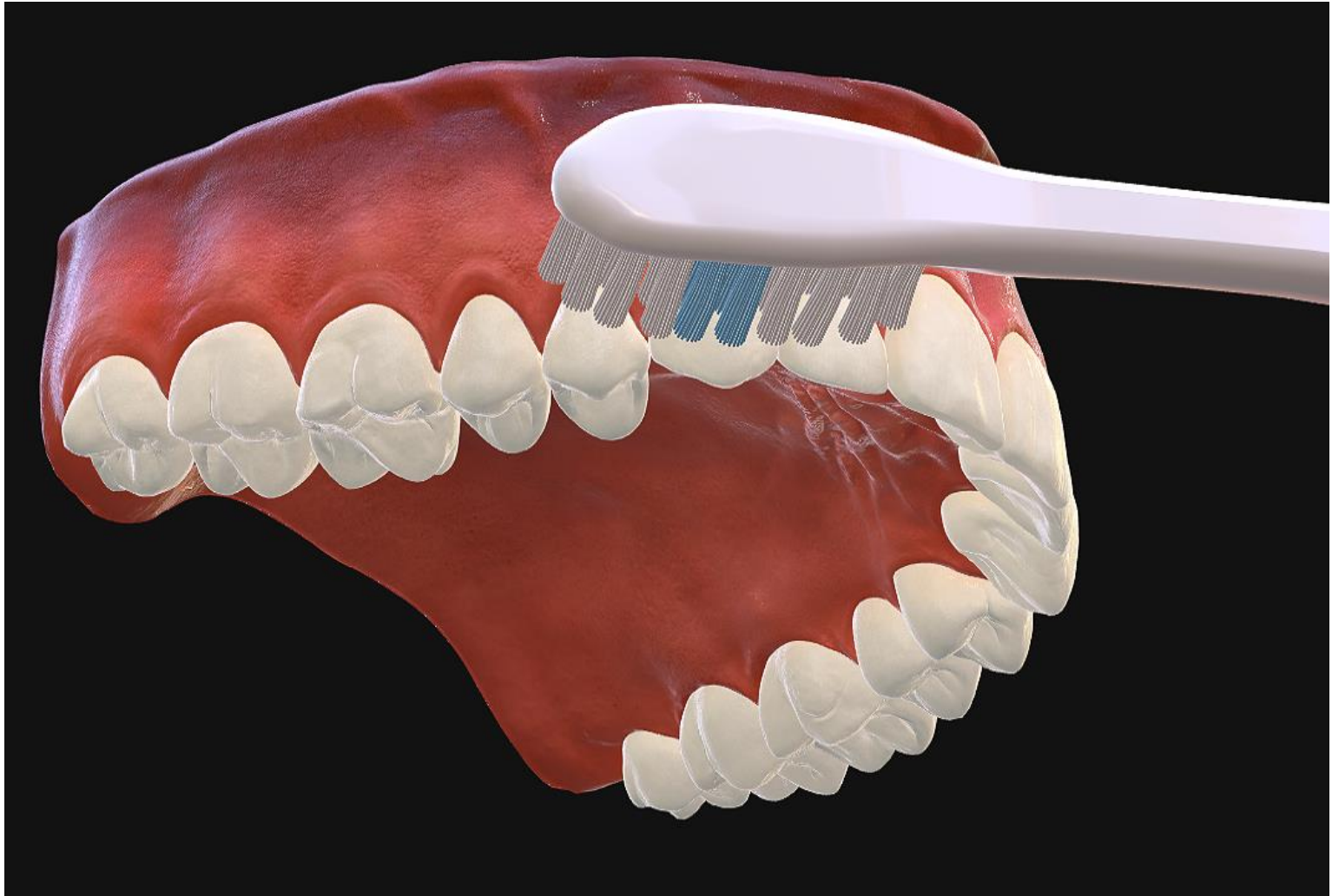
# DHLOSCE Test Content: Animated 3D Models



# DHLOSCE Test Content: Animated 3D Models



# DHLOSCE Test Content: Animated 3D Models



# DHLOSCE Test Content: Animated 3D Models

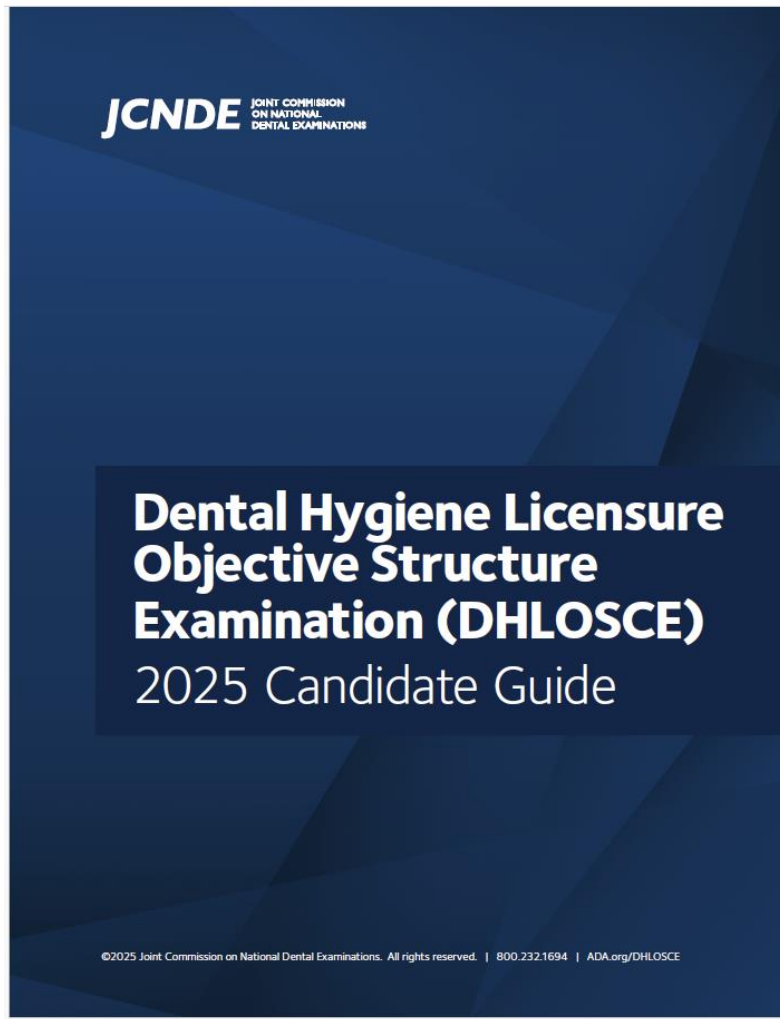


# DHLOSCE Administration Schedule

- The DHLOSCE contains four sections and requires 7 hours and 35 minutes to administer.

SECTION	MINUTES
Tutorial (optional)	25
Section One (37 Questions)	90
Scheduled Break (optional)	10
Section Two (38 Questions)	90
Scheduled Break (optional)	30
Section Three (37 Questions)	90
Scheduled Break (optional)	10
Section Four (38 Questions)	90
Post-examination survey	20
<b>Total Time</b>	<b>7 hours 35 minutes</b>

# DHLOSCE Candidate Guide



<http://ada.org/dhlosce>

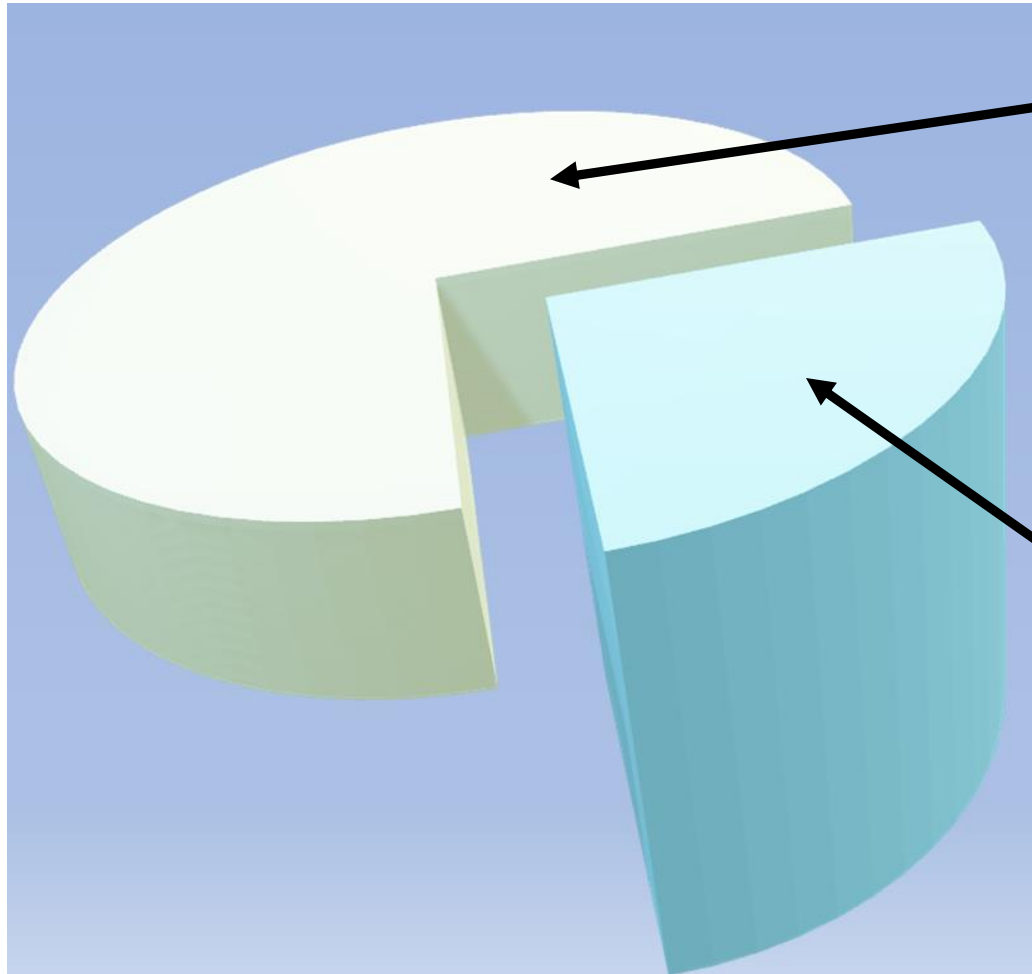
DHLOSCE policies and procedures mirror those of other examinations of the JCNDE, most closely matching those of the National Board Dental Hygiene Examination (NBDHE).

# DHLOSCE Candidate Guide

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# How do the DHLOSCE and NBDHE Differ?



**“Domain of Dental Hygiene” (NBDHE)**

**DHLOSCE Content Domain.** Clinical content directly applicable to chairside treatment. **Also represents overlap between NBDHE and DHLOSCE.**

# How do the DHLOSCE and NBDHE Differ?

- The DHLOSCE and NBDHE **both assess clinical competence**  
However, key differences exist:
  - The **DHLOSCE** is focused exclusively on the **clinical tasks** a dental hygienist performs while providing direct, chair-side treatment to **patients** (*a narrower focus*).
    - Micro-judgments, errors, and knowledge of success criteria
  - The **NBDHE** focuses on **cognitive skills** (*a broader focus*).
    - Biomedical and behavioral underpinnings of clinical decisions, knowledge that includes the “why”
    - Professional responsibility considerations, evidence-based practice, being good consumers of research, patient oral health care education, etc.

# DHLOSCE Key Events

Year	Activity
2024	Release of 2025 Candidate Guide (updated as needed) * completed *
2024	Development of DHLOSCE Prototype
2025	Release of Prototype
2025	Launch of DHLOSCE (4 <sup>th</sup> Quarter, final date TBD)

# Invitation to Participate in a Unique Opportunity

- The Joint Commission plans to make the DHLOSCE prototype available to a small number of dental hygiene education programs in 2025
- These programs would get an early look at this innovative new examination
- Participating programs would receive an incentive in exchange for administering the prototype to their students and providing student information the JCNDE can use to establish validity evidence
- **Is your dental hygiene program interested in participating in this unique opportunity? Contact us!**

David Waldschmidt [waldschmidtd@ada.org](mailto:waldschmidtd@ada.org)

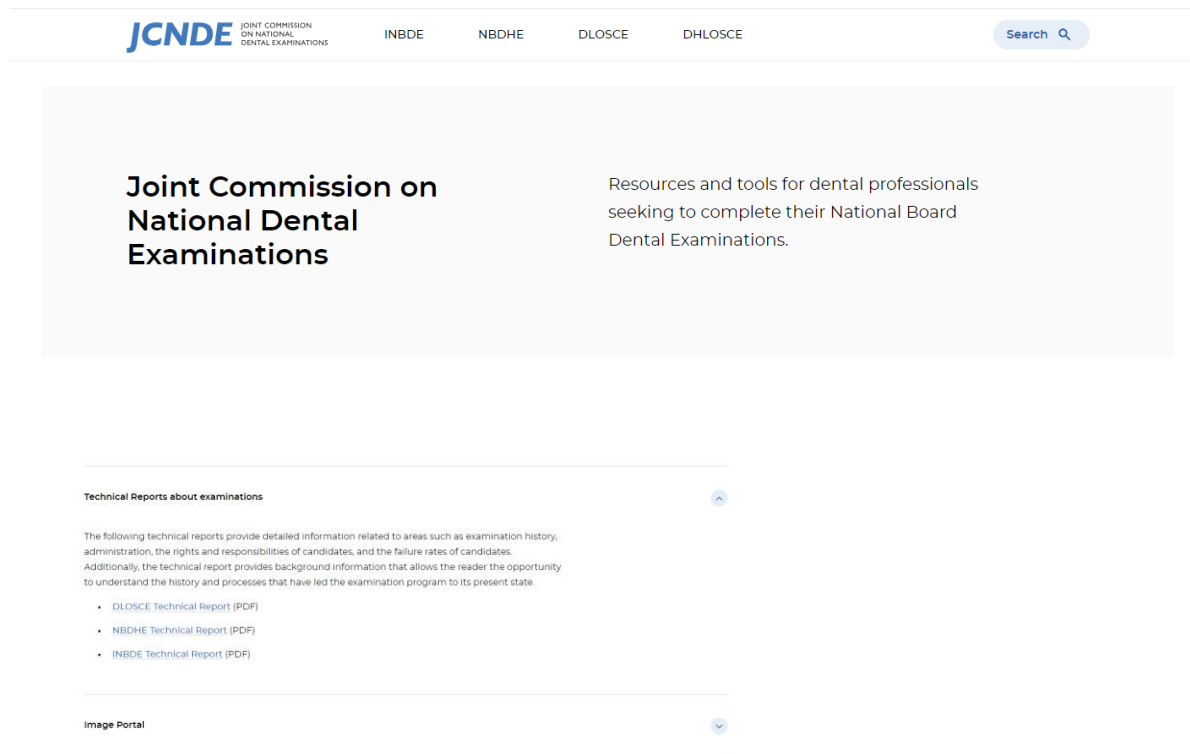
# Why Develop the Dental Hygiene Licensure Objective Structured Clinical Examination (DHLOSCE)?

**“There is no peer-reviewed scientific evidence that correlates [legacy 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.” (p640)**

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

# Technical Information about Legacy Clinical Examinations

- JCNDE staff were unable to locate current technical reports by legacy clinical examination testing agencies, simply by navigating their websites.
- In contrast, the JCNDE makes its technical reports publicly available on its website (<https://jcnde.ada.org/>):



# Technical Information about Legacy Clinical Examinations

- When requested, the legacy clinical examination testing agencies have refused to provide technical reports to the ADA.
- Scrutiny of prior technical reports—as well as published findings in peer-reviewed journals—have revealed significant concerns:
  - poor relationships between legacy clinical examinations and other measures of clinical performance
  - poor psychometric properties
  - confusing validity with reliability
  - inexplicable findings

# Technical Information about Legacy Clinical Examinations

**Example of inexplicable findings.** The following quotes come from the published 2011 and 2017 technical reports from a clinical testing agency, involving a patient-based dental hygiene clinical examination. The scales involved include areas such as extra/intra oral assessment, periodontal probing, scaling, and supragingival calculus/deposit removal.

“All correlations [*among these scales*] are positive and statistically and practically significant. These correlation coefficients range from .37 to .92.” (2011)

“The test is sensitive enough to detect high performance on the tasks in this test. Correlations among these four subtests range from .01 to .05.” (2017)

**The correlations in 2017 do NOT support the underlying measurement of psychomotor skills within this examination! Nor would they support the underlying measurement of clinical judgment.**

# The experience of schools from a practical perspective

The University of Iowa's Experience with Manikin-based Dental Clinical Licensure Examinations (Dr. Michael J. Kanellis, 2019)

Year	Initial Pass	Initial Fail	Retake Pass	Final Pass
2018-2019	83.3	16.7	100	100%
2017-2018	88.3	11.7	100	100%
2016-2017	86.8	13.2	100	100%
2015-2016	88.1	11.9	100	100%
2014-2015	89.3	10.7	100	100%
2013-2014	85.4	14.6	100	100%
2012-2013	90.1	9.9	100	100%
2011-2012	84.3	15.7	100	100%
2010-2011	Patient-based examination.			100%
2009-2010				100%
2008-2009				100%
2007-2008				100%
2006-2007	92.0	8.0	100	100%
2005-2006	90.0	10.0	100	100%

*Final result is always a pass “with little to no remediation.”*

# Conclusions for Legacy Clinical Examinations

- Unfortunately, the clinical licensure testing agencies fail to make publicly available current information concerning the psychometric performance of their examinations.
- Results are not consistent and contain substantial random error (unreliable).
- Virtually everyone passes in the end.
- Results fail to accurately reflect candidate skills (validity, reliability, fairness).
- Prevent qualified candidates from obtaining a license.
- Potentially harms the reputation of candidates who have the skills but fail anyway.
- Lack sufficient validity evidence to support their usage.
- Fail to protect the public.

# Modernizing Dental Hygiene Licensure

- Join the Joint Commission in advancing the DHLOSCE!
- The JCNDE needs your help to modernize dental hygiene licensure in your state.
- Learn more about the DHLOSCE at the JCNDE's website:  
[jcnde.ada.org/](https://jcnde.ada.org/)
- Interested in becoming a champion for the DHLOSCE? Let us know!

David Waldschmidt [waldschmidtd@ada.org](mailto:waldschmidtd@ada.org)

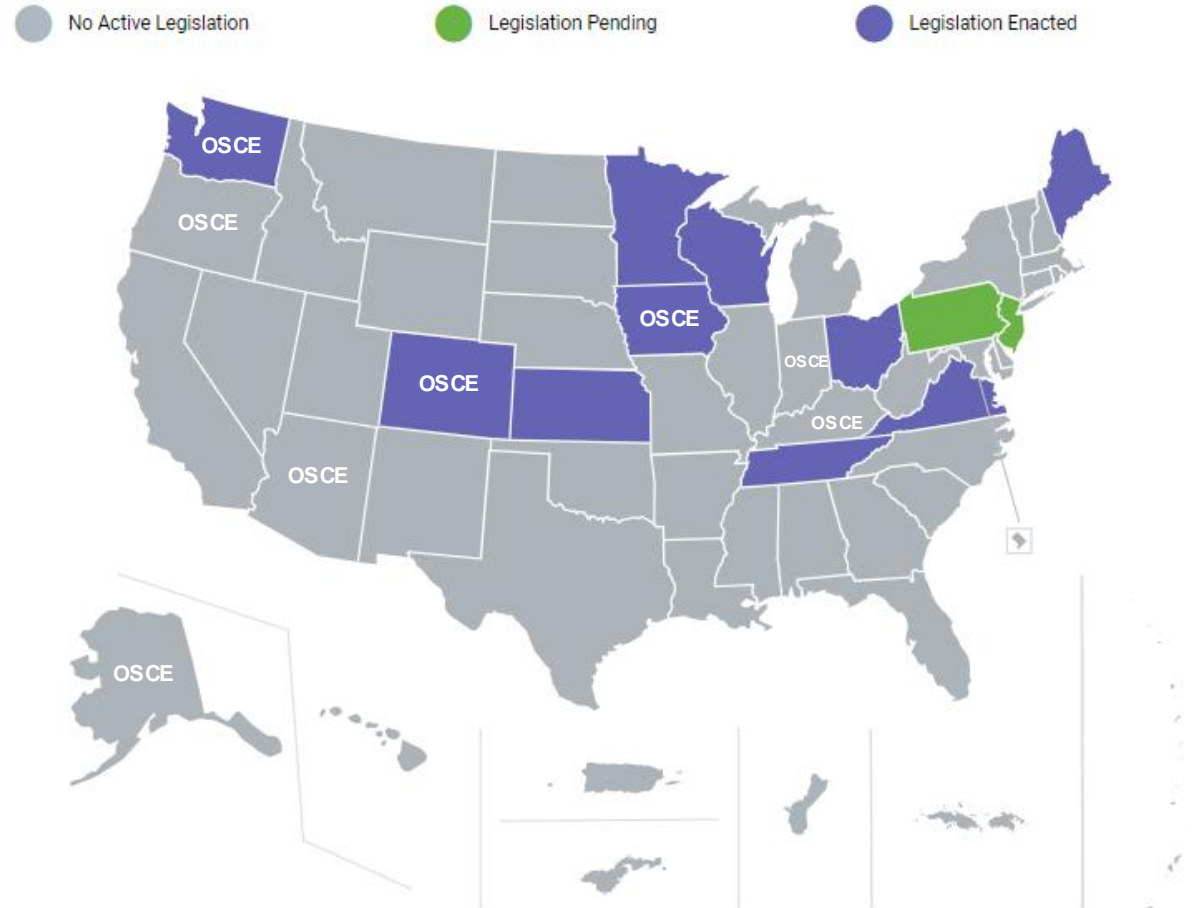
Matthew Grady [gradym@ada.org](mailto:gradym@ada.org)

# Dentist and Dental Hygienist Compact

- The states appearing below in **purple** accept the DLOSCE and have enacted legislation to accept the DDH Compact.

- Alaska\*
- Arizona
- Colorado**
- Indiana
- Iowa\***
- Kentucky
- Oregon
- Washington**

- Individuals who are licensed in the purple states indicated will be eligible to seek compact privileges in the other states that appear in purple on the map.



\* Partial fulfillment of state's clinical licensure examination requirement.

<https://ddhcompact.org/compact-map> (downloaded Sept 13, 2024)

# Questions?

Thank you!