The State Board Directed Uniform National Licensure Examination Development Process
Examinations

A component of the process to insure that only competent practitioners that can perform appropriately receive a license

Identifies individual who should not receive a license-not a certification process

- Evaluator bias
  - Independent third party

- NO system is perfect in admission, education, or testing
Why Patients?

- Competence vs Performance
- “Non-Delegable Skills”
- Management of disease currently not possible in simulation
- The work speaks for itself
- There is no real Peer Review and QA in the Dental Profession
2005

- ADEX
- Created as a national licensure test construction entity
- An organization of state dental boards
- Fiscally organized to eliminate market based conflicts of interest
- No political appointments
- All committee members, representatives, and officers and the BOD are appointed and elected by the active state dental board, the licensing authority
Examination Development

- Occupational Analysis
  - Survey
    - Your state?
  - Crosswalk with examination components resulting in Blueprint
    - Your state?
  - Expert panels for scoring
    - Your state?
Clinical Licensure Examinations

- Examines the candidates’ clinical abilities in the critical dental and dental hygiene competencies
- Assesses candidates ability to *perform* “on demand” independently
Who are the Stakeholders?

- **The Public**
  - Stakeholders are those at risk and therefore require protection.
  - Licensure is granted by the public for their protection.
  - Assessments should ensure that only qualified individuals are allowed to practice dentistry.
Communities of Interest
All other Interested Parties

- Professional Associations that represent the interests of the Profession (ADA)
- Educational institutions (ADEA)
- Candidates for licensure
A vital component of the examination process

Oldest continually maintained and psychometric clinical OSCE in US in dentistry

Performance OSCEs are also a vital component
Applied diagnosis and treatment planning

Assessment of patient medical history and complications

Skill sets which do not lend them selves to standardized performance testing
- Oral Surgery
- Ortho
- Applied pharmacology
- Pathology
- Applied anatomy
Performance OSCE

- Prosthodontics
- Endodontics
Examination Series

- Each component identifies a different cohort
OSCE

- Strength:
  - Standardized

- Weakness:
  - Answers provided unless pure essay
The ADA has voiced its position regarding the use of patients in clinical examinations through a series of resolutions culminating with the adoption of the 2005 House of Delegates' Resolution 20H-2005.

This resolution reaffirms ADA support for the elimination of patients in the clinical licensure examination process while giving exception to ... testing known as the curriculum-integrated format (CIF)
The 2006 ADA House of Delegates directed the ADA Council on Dental Education and Licensure to develop a definition of CIF and present it to the 2007 House of Delegates. The 2007 House adopted the following definition (1H:2007):
CIF

- Curriculum Integrated Format: An initial clinical licensure process that provides candidates an opportunity to successfully complete an independent “third party” clinical assessment prior to graduation from a dental education program accredited by the ADA Commission on Dental Accreditation.
If such a process includes patient care as part of the assessment, it should be performed by candidates on patients of record, whenever possible, within an appropriately sequenced treatment plan. The competencies assessed by the clinical examining agency should be selected components of current dental education program curricula.
All portions of this assessment are available at multiple times within each institution during dental school to ensure that patient care is accomplished within an appropriate treatment plan and to allow candidates to remediate and retake any portions of the assessment which they have not successfully completed.
ADA Ethical Concerns

- Soliciting and Selecting Patients
  - Reimbursements between candidates and patients in excess of that which would be considered reasonable (remuneration for travel, lodging and meals).
  - Remuneration for acquiring patients between licensure applicants.
  - Utilizing patient brokering companies.
  - Delaying treatment beyond that which would be considered acceptable in a typical treatment plan (e.g. delaying treatment of a carious lesion for 24 months).
ADA Ethical Concerns

Informed Consent

- A statement that the patient is a participant in a clinical licensure examination, that the candidate is not a licensed dentist, a description of the procedures to be followed and an explanation that the care received might not be complete.

- A description of any reasonably foreseeable risks or discomforts to the patient.

- A description of any benefits to the patient or to others which may reasonably be expected as a result of participation.
ADA Ethical Concerns

- Informed Consent
  - A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the patient.
  - *An explanation of whom to contact for answers to pertinent questions about the care received.*
  - A statement that participation is voluntary and that the patient may discontinue participation at any time without penalty or loss of benefits to which the patient is otherwise entitled.
Patient Care

Beneficence states that the dentist has a “duty to promote the patient’s welfare.” Candidates can do this by ensuring that the interests of their patient are of primary importance while taking the exam. Examiners contribute to this by ensuring that candidates are adequately monitored during the exam process such that the following treatment does not occur:
ADA Ethical Concerns

- Patient Care
  - Unnecessary treatment of incipient caries.
  - Unnecessary patient discomfort.
  - Unnecessarily delaying examination and treatment during the test.
Follow-Up Treatment

- A clear explanation of what treatment was performed as well as what follow-up care may be necessary.
- Contact information for pain management.
- Complete referral information for patients in need of additional dental care.
- Complete follow-up care ensured by the mechanism established by the testing agency to address care given during the examination that may need additional attention.
ADEX PC-CIF Examination Format

- Addressed every concern in creating the format
- Allows each dental school to adapt the format to their institutional needs
Patient Centered CIF Patient Care must be part of an approved treatment plan as defined by the dental school.

Unacceptable candidate performance is explained to the candidate by the faculty supervising follow-up.

Patient follow up care is provided under the dental school’s protocol for supervision of follow up care.
No current simulation in the primary disease we treat caries
- Variability
- Anatomical access
- Caries vs infected dentin vs affected dentin vs stain

Patient evaluation have no answers provided but requires real-time evaluation of the patient supervised by a CFE

PC-CIF: Faculty are supervising treatment planning and sequencing, review of outcomes and all post operative care under their institutions protocols
OSCE

- Best example of an OSCE superior to patients:
- ACLS
Board of Trustees approves development of an OSCE examination similar to Canada’s station based written examination.
Canada

- Canadian system has a much smaller population of candidates.

- In addition there is a consolidation of responsibilities with respect to training and assessing a dental candidate’s clinical skills performance prior to licensure.

- The NDEB maintains that candidates learn and are assessed on performance-based skill set types during their time at accredited dental schools in Canada prior to taking their OSCE.
The NDEB is responsible for multiple aspects of the training and licensure process from being responsible for defining competencies, overseeing accreditation, and maintaining the licensing examination program.

A critical importance in making comparisons to the Canadian system is that candidates who are not from accredited schools are still required to take a clinical skills examination as part of the licensure process.
A centralized system like Canada’s is not currently employed as part of the U.S. system. Rather, the different stakeholder groups responsible for training, accreditation of training programs, and independent evaluation of minimum competence in the U.S.
ADEX and the Bottom Line

- If your state really wants an OSCE and manikin exam:
- ADEX has the longest continually maintained and psychometrically evaluated and proven cognitive and performance OSCE and manikin examinations
- Why go to an examination that is not even in existence with no psychometric or real world track record
Question

- Which of those candidates would you let treat your family?
Why Patients?

- The work speaks for itself
A Response to the American Dental Association's Proposed Use of an Objective Structured Clinical Exam

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August 7, 2017
Abstract

There has been increased scrutiny as of late within the dental community about the use of the clinical examination component that is currently part of the licensure examination taken by eligible candidates in almost all U.S. jurisdictions. In particular, critics of the clinical exam have cited a number of issues ranging from ethical concerns of using live patients to assertions that unqualified candidates are not successfully being screened out by the clinical skills assessment portion. As one of those critics, the American Dental Association (ADA) has embarked on a process to create an Objective Structured Clinical Examination (OSCE) modeled after that of the National Dental Examining Board (NDEB) of Canada, which relies on testing candidates exclusively on their clinical judgment, but not their psychomotor (performance) skills. The purpose of this white paper is to discuss an OSCE as proposed by the ADA, critique the evidence used to support this proposal, and to discuss validity evidence of cognitive and psychomotor skills measured by the clinical examinations developed by the American Board of Dental Examiners (ADEX).
Introduction

The high stakes nature of the examination components of dental licensure continues to be a source of discourse throughout the dental community. The clinical examination component, in particular, has been of interest as of late. Test administration agencies currently accept and administer clinical examinations that include a combination of items and tasks designed to assess clinical judgment (i.e., cognitive) as well as clinical skills (i.e., psychomotor). However, critics of this design argue that the use of an Objective Structured Clinical Examination (OSCE) that solely tests clinical judgments could measure both judgments and skills. The counter to this argument is that this approach would eliminate measurement of the psychomotor or performance-based assessment aspect from dental licensing requirements, creating a gap in—and threatening the validity evidence base of—the current examination process. This white paper explores this argument by evaluating the plan of a membership association’s efforts to develop and implement this proposed alternative design.

The American Dental Association (ADA) intends to develop a Dental Licensure Objective Structured Clinical Examination (DLOSCE) that it purports will eliminate the need for a separate clinical skills assessment and create a unifying, national licensure examination process. As outlined by the ADA, the DLOSCE would follow the National Dental Examining Board (NDEB) of Canada’s OSCE. This proposed approach would yield an examination design that eliminates the current clinical examinations’ assessment of clinical skills or the assessment of a candidate’s practical ability to treat live patients. Rather, it would solely test a candidate’s clinical abilities with simulated models or a multiple-choice written examination.

The ADA has offered several reasons as to why the DLOSCE would be advantageous to the current examination. First, the ADA indicates that its psychometric review of available validity and reliability evidence strongly suggests that clinical examinations fail to “screen out” licensure candidates with inadequate psychomotor skills. Second, the ADA suggests there is a lack of correlation between performance on the clinical examination and performance in dental
school (student’s GPA or class rank). Third, the ADA has cited ethical concerns with including live patients in the examination process. Therefore, the ADA believes that the use of a DLOSCE, as the ADA has defined it, would produce stronger validity and reliability evidence and thus, be a better screener to identify qualified candidates for dental licensure.

Professionally accepted measurement practices dictate following specific steps to develop an OSCE that will collect and evaluate valid and reliable results for a licensure program. Specifically, the *Standards for Educational and Psychological Testing* defines validity as “the degree to which accumulated evidence and theory support specific interpretations of test scores entailed by proposed uses of a test” (p. 184). When a licensure or certification body proposes the development of a new exam, a vital element of gathering validity evidence begins with stating the newly proposed exam’s test purpose and determining exam content. While details of the ADA’s DLOSCE “remain in the works,” the ADA has stated the purpose of the examination will be to discern “whether a candidate for dental licensure possesses the necessary level of clinical skills to safely practice entry-level dentistry.”

The purpose of this white paper is to discuss OSCEs as proposed by the ADA, critique the assertions and evidence offered by the ADA with respect to current clinical examinations, and to evaluate the ADEX examination in the context of the ADA’s proposal.

**Objective Structured Clinical Examinations**

Present requirements for dental licensure by most jurisdictions in the United States include 1) graduation from an accredited dental education program, 2) satisfactory completion of the written National Board Dental Examinations (NBDE) Parts I and II, 3) satisfactory completion of a clinical examination; and in some states, 4) additional testing certification, and/or state-specific requirements. Each of these requirements provides unique information to the licensure decision. Specifically, the NBDE exams and the clinical licensure exams focus on different aspects of the dental profession as they relate to safe, entry-level practice. Parts I and II of the NBDE exams concentrate on the knowledge that is required for an entry-level dentist,
whereas the clinical exams are designed to measure the clinical judgments and skills of an entry-level dentist.

For over three decades, OSCEs have been used to measure clinical competency skills within the medical field.\(^3\) OSCEs are performance based tests that typically consist of a series of tasks, sometimes implemented as “stations,” in which candidates are directly observed interviewing, examining, and treating patients in a simulated environment that is intended to approximate a job-related setting. Tasks can include a range of activities, such as interpreting laboratory results, taking a patient’s medical history, reading radiographs, and delivering bad news to a patient. When patients are used in an OSCE, they are often referred to as standardized patients (SP) who have been trained to play the role of a real patient. Traditionally, candidates’ communication skills as well as their clinical skills are assessed during an OSCE by a team of examiners trained to evaluate candidate performance on a range of pre-determined criteria generally including knowledge, performance, communication, and interaction. Examiners typically use a checklist or global rating scale, such as a Likert scale, to score candidate competency.

The ADA suggested that its proposed DLOSCE will be modeled after Canada’s dental licensure OSCE. To become a licensed dentist in Canada, three requirements must be met: 1) graduation from an accredited dental education program, 2) satisfactory completion of the NDEB written examination, and 3) satisfactory completion of the NDEB OSCE.

In 1995, the NDEB began administering an OSCE that consists of a series of 25 stations that use simulated clinical scenarios as part of its licensure program. At each station, candidates consider the scenario, relevant stimuli, and answer questions based on the case presented. Test items consist mostly of extended match questions, and some stations require candidates to review patient information and write a prescription for an acceptable medication commonly used by Canadian dentists. In the extended match questions, candidates are presented with a case and asked to choose from up to 15 response options with one or more correct answers. Candidates are
given five minutes to answer the questions presented at each station. According to the NDEB, the exam is developed based on the Competencies for a Beginning Dental Practitioner in Canada, a document which contains approximately 50 statements about what a beginning dental practitioner must be able to know and demonstrate.

Traditionally, OSCEs are scored by human evaluators who use checklists or scales to assess a candidate’s active knowledge and skills in a performance-based setting. The NDEB deviated from this practice and incorporated the extended match questions that assess clinical judgments, but do so in a passive manner by presenting candidates with the answer options. Therefore, these question types focus on cognitive abilities, but do not require that candidates produce information of their own accord or that they mimic the actions they would need to perform as a practicing dentist.

Measurement of Psychomotor Skills Versus Clinical Judgments

The ADA has argued that an OSCE modeled after NDEB’s exam would produce more valid and reliable scores than the current clinical examinations. However, the ADA’s proposal presents a key threat to validity: the loss of independent verification of entry-level psychomotor skills (i.e., content validity aligned with job-related practice). As an assessment of clinical judgment, the NDEB OSCE has proven validity evidence. However, the most significant difference between the NDEB OSCE and a clinical skills examination is that the NDEB OSCE is strictly an assessment of clinical judgment. The NDEB exam does not assess beginning dentists’ psychomotor or communication skills. In other words, the NDEB OSCE does not assess a beginning dentist’s clinical skills using either simulated or live patients.

Taking a step back, content validity refers to how well a proposed exam accurately relates to the job-related knowledge, skills, and abilities required of a minimally competent candidate for licensure. From the research on dental practice, there are commonly three areas of required expertise: domain-specific knowledge (e.g., pathology, pharmacology, histology), clinical judgments (e.g., diagnosis, treatment planning, aftercare plan), and clinical skills (e.g.,
surgical component, psychomotor abilities in multiple domains). The domain-specific knowledge components are typically measured in a written/computerized exam format. The clinical judgment components are often measured through either a written/computerized format or a skills-based exam with judgmental steps incorporated. Finally, the assessment of clinical skills is typically measured through a performance exam where examinees must complete tasks, procedures, or steps within a procedure. Without each of these components, the program may fail to provide a comprehensive measure of the set of knowledge, skills, and abilities that reflect what occurs in dental offices on a day-to-day basis. For the purpose of licensure, this gap can increase the risk to the public of an incompetent practitioner.

Because dental schools will inevitably vary in their admissions policies, retention policies, and more important, in the ways they design (i.e., curriculum) and teach (i.e., instruction) clinical skills and the standards used to evaluate them, a common standard is required to ensure that all dentists are competent prior to being able to practice independently. The determination of clinical competence should be assessed through a combination of demonstrated knowledge and practical abilities. In addition to examinations that test knowledge and judgment, the licensure process must also test a candidate’s ability to perform clinical skills in a setting that simulates job-related conditions.

Therefore, if the ADA contends that its proposed exam would serve as a replacement for current clinical skills testing, it would be appropriate for any dental licensing board responsible for protection of the public in its jurisdiction to ask the question of why this important psychomotor component is not included.

Research on Clinical Skills Examinations

The ADA claims that psychometric research indicates that patient-based, clinical exams fail to “screen out” or keep unqualified candidates from becoming certified. This research appears to be largely based on a study of graduates of Canadian dental programs who at the time were required to take four exams in order to become eligible for licensure: 1) a written examination
that tested the foundations of dental science, 2) a clinical I written examination of clinical judgments, 3) a clinical II skills examination that tested their ability to perform procedures on simulated patients or manikins, and finally, 4) a clinical III skills examination that tested the candidate’s ability to perform procedures on live patients. The authors of the study concluded that because a high percentage of candidates passed the fourth and final patient-based, clinical skills examination, this component was ineffective in identifying qualified licensure candidates.4

However, the validity of this claim is flawed in that it does not consider the representation of the construct as the primary source of evidence, nor does it acknowledge a potential sequencing effect of the examination administration process outlined in the study. In other words, if there is a strong intercorrelation among the cognitive and skills components as suggested by these conclusions, then the order of the exams influences the “screening out” process and may have contributed to the high passing score on the clinical III component of the examination process. For example, if candidates were required to take the clinical III examination first and the initial written examination last, the written examination would more than likely have produced a similarly high passing score. Reversing the order of the examination process for graduates of schools in Canada would have a similar effect: the clinical skills (i.e., clinical II and clinical III) examinations would screen out a certain percentage of candidates and the written exam would more than likely have a higher passing score. Would the authors have been similarly comfortable concluding that the written examinations that measure knowledge of dental science and clinical judgments did not add value to the licensure decision?

Moreover, this same statistical trend is commonly found in other high stakes medical credentialing examinations that have demonstrated valid and reliable evidence given the risk to the public. For example, Step II Clinical Skills (CS) of the United States Medical Licensing Examination (USMLE) is a standardized patient examination that measures a candidate’s clinical skills. Exam pass rates for this exam from 2012–2016 ranged from 95%–97% with approximately 19,000 candidates tested each year.5 Like the current comprehensive examination process used by
the American Board of Dental Examiners (ADEX) to license dentists in the U.S., the Step II CS exam is also preceded by written assessments of knowledge and judgment in an effort to provide a comprehensive representation of the construct.

The NDEB chose to eliminate the skills or performance-based component of its licensure examinations for graduates of Canadian dental schools in part because the Canadian system has a much smaller population of candidates in addition to a consolidation of responsibilities with respect to training and assessing a dental candidate’s clinical skills performance prior to licensure. The NDEB maintains that candidates learn and are assessed on performance-based skill set types during their time at accredited dental schools in Canada prior to taking their OSCE. Furthermore, the NDEB is responsible for multiple aspects of the training and licensure process from being responsible for defining competencies, overseeing accreditation, and maintaining the licensing examination program. Yet of critical importance in making comparisons to the Canadian system is that candidates who are not from accredited schools are still required to take a clinical skills examination as part of the licensure process.

A centralized system like Canada’s is not currently employed as part of the U.S. system. Rather, the different stakeholder groups responsible for training, accreditation of training programs, and independent evaluation of minimum competence in the U.S. serve as a system of checks and balances to mitigate the effects of conflicts of interest. And, although performance or psychomotor skills should certainly form a large part of dental school teaching practices, “the question should not be about what a student accomplished in school with consultation and educational guidance, but should be about the quality of work a candidate can demonstrate independently at a time near the time that the candidate wishes to enter practice” (p.7). Therefore, the current comprehensive nature of the U.S. licensure requirements serves as that standardized set of checks and balances.
Comparisons with GPA or Class Rank

The ADA cites several reasons for what it believes is the inadequacy of current patient-based dental licensure examinations. One of these reasons is its belief that there is a lack of correlation between students' class rank and/or GPA at dental school and those same students' scores on clinical examinations. In psychometric terms, correlation is a statistical technique that measures and describes the relationship between two variables. Correlations can provide us with information on the nature of the relationship (positive or negative), the form of the relationship (e.g., linear, quadratic) and the magnitude of the relationship (-1.0 to 1.0).

The ADA's assumption is that dental students with high GPAs and/or who are at the top of their class should also receive higher scores on their clinical exams. A lack of correlation between these two variables is used to call into question the validity and reliability of the test scores for the clinical skills components of the licensing examination process. The evidence presented by the ADA to demonstrate the lack of correlation is primarily based upon a relatively small number of studies conducted mostly in one dental school and on one clinical examination: the CDCA's.\(^7\) Specifically, the authors of the study argue that 1) the CDCA examination is not a good measure of how faculty will grade students in dental school, 2) there is a high level of fluctuation each year in the clinical examination results (with the exception of the DSCE written component), and 3) different sections of the examinations are not able to validate each other.

It is a common, intuitive mistake to infer causality from an observed correlation or failing to consider alternate factors that may be responsible for an identified correlation or lack thereof. Grades in a classroom setting and performance on a clinical skills examination are not measures of the same construct. A candidate might be very capable on the cognitive aspects, but unable to perform the psychomotor skills needed to be an entry-level dentist. Content and grading practices are unique to the institution and instructor, and class rank is relative to the students' cohort. Grades may also be influenced by student effort, attendance, and attitude. Some studies have also suggested that faculty members often inadequately evaluate the skills vital to the determination of
competent performance in the medical field. In contrast, the content and grading practices for clinical skills examinations are based upon external and standardized verification of a candidate's knowledge, skills, and abilities. GPA metrics (often represented on a scale from 0.0–4.0), class rankings, and the pass/fail determination of licensure examinations are measures based on different constructs and for different purposes. Specifically, the variability sought in using GPA or class rank is not a goal of a licensure examination. Therefore, calculating correlations among these variables leads to misinterpretation and flawed conclusions.

Correlation is based on the ability of two measures of the same trait or construct to produce scores that are similarly rank ordered. Year-to-year fluctuation is somewhat misleading when the question is really about decision consistency. Rank order position is not the focal question, particularly when measures like GPA are heavily influenced by construct-irrelevant variance as it relates to the clinical skills being measured. This becomes even more problematic when the measures are designed to represent different components of the domain, such as GPA and clinical skills examination scores. It is not surprising from a psychometric standpoint that two measurement systems with unique purposes would fail to demonstrate a strong relationship when using a statistical technique that is intended for rank ordering when one of the measures is not designed to produce rank ordered results.

The assertion that different sections of the clinical examination do not validate one another is also problematic from a measurement standpoint. This claim assumes that a one-dimensional relationship exists among the different components (e.g., operative/restorative, endodontic, prosthodontics) assessed through the clinical examination process. However, the assumption that a strong relationship should exist among the different exam components is "likely to be unsupported on dental clinical tests...because these disciplines represent different dimensions of dentistry that contain unique skill sets." The curriculum and instruction for these different domains within the field are unique. If these were simply skills that generalized to any domain, there would not be a need for dental schools to have separate departments or faculty for
each of these important aspects of the profession (e.g., operative, endodontics, prosthodontics). Further, the profession would not have recognized specialty level skills in these areas. Organizations such as ADEX have determined these as unique domains and, consequently, have separate examinations for each to illustrate that understanding.

**Other Research on Psychomotor Skills**

The importance of an independent assessment, separate from a training or preparation program, of the psychomotor skills of licensure candidates who are required to use their hands and communicate with patients as part of their everyday practice or job cannot be understated. While medical school graduates are required to attend residency programs that provide advanced clinical skills training, general dentists are considered potentially qualified to practice upon graduation from dental school. Despite the advanced training received during a residency program, medical students from a variety of fields are still tested on their written knowledge and judgment abilities as well as their clinical performance skills prior to graduating and becoming a licensed doctor.

To illustrate, the USMLE consists of four exams that medical students must pass as part of the process to become a licensed physician. Of these exams, one component is the Step II Clinical Skills (CS) performance exam. The USMLE clinical skills exam is a hands-on exam that assesses an examinee’s ability to gather necessary information from a patient, perform physical exams, communicate findings to the patient, and write patient notes. The clinical skills exam was added to the USMLE in 2004 because research by the National Board of Medical Examiners (NBME) suggested that it was essential to have an independent performance measure of students’ ability to actively provide patient care.¹⁰

Graduates of osteopathic medicine are also required to take a clinical skills exam as part of their comprehensive licensure process. Similar to the USMLE’s Step II CS exam, the osteopath's exam is a performance assessment of clinical skills in which students encounter 12 standardized patients and are required to demonstrate their ability to take patient history, perform
physical exams, document findings, and express appropriate interpersonal skills and professionalism.

In addition to the clinical skills abilities measured by the USMLE and osteopathic exams, graduates seeking licensure in optometry must also demonstrate their ability to utilize ophthalmic equipment to perform refractions and retinoscopies, test pupils, and perform injections. A mixture of standardized and simulated patients is used throughout the assessment.

The clinical licensure exams discussed above utilize a conjunctive exam process that mirror current dental licensure requirements in the U.S., combining written examinations of knowledge and judgment with clinical skills or performance-based examinations. Being able to represent an adequate combination of these skill sets has been deemed vital by the aforementioned organizations in determining whether or not a candidate is qualified for clinical licensure.

**Implementing an OSCE**

OSCEs that measure clinical situations have been used in undergraduate medical assessment for over 20 years. However, their implementation in the field of dentistry is relatively new. Before implementing a DLOSCE as proposed by the ADA, state boards of dentistry are encouraged to consider:

- What evidence from the ADA’s practice analysis supports the use of a clinical judgment DLOSCE in lieu of comprehensive measurement of the entry-level knowledge, skills, abilities, and judgments needed to safely conduct independent practice?
- How will the ADA legally defend jurisdictions that would adopt a clinical judgment DLOSCE in lieu of comprehensive measures of clinical abilities?
- What additional assessments, if any, will be used with the ADA’s proposed DLOSCE given the inherent limitations as comprehensive measurements of clinical skills?
• What unique information would the ADA’s proposed clinical judgment DLOSCE provide to the licensure process?

Conclusions

In the United States, there continues to be a need for independent verification of dental licensure candidates’ clinical skills as a critical requirement of the licensure process. An OSCE as envisioned and proposed by the ADA is not a replacement for current comprehensive clinical licensure examinations because it would not be representative of all the important knowledge, skills, and abilities required to be a minimally competent dentist. Moreover, the claims made by the ADA regarding current clinical skills examinations are based on limited evidence and data in addition to misleading conclusions that, when considered in a broader context and alongside other variables, does not hold up to scrutiny.

Examinations representing the development, validation, and construct representation of dental judgments and psychomotor skills as comprehensive measures of entry-level practice already exist within the current licensure examination process, calling into question the need for a new examination.\(^{12,13}\) The ADA’s use of an OSCE modeled on Canada’s requirement would most likely be redundant when considering that examinations that solely test a dental candidate’s clinical judgment have already been developed with established validity evidence by some organizations. If the ADA plans to offer its OSCE as an option that would be used in lieu of clinical skills examination, then it should include a component that tests dental candidates’ ability to perform in a dental setting. However, as proposed and purported, there does not appear to be sound theoretical or psychometric evidence that having good clinical judgment abilities are a sufficient proxy for demonstrated clinical skills.
References


September 6, 2017
William K. Lobb D.D.S., M.S., M.P.H.
Dean and Professor
Three Important Points

- We are not opposed to a form of “third party review”- ideally this should be a cooperative effort between the Dentistry Examining Board and the dental school

- We oppose live patient exams, and welcome the opportunity to explore alternatives to licensure that do not involve these formats with the Dentistry Examining Board

- We are excited about the potential for the adoption of an OSCE format and will be an eager participant in the implementation of this new format
- "Dental schools are not concerned about patient safety"

- "Dental schools do not fail students who are unable to perform clinically"
Courses

Year 1-4

Pre-Clinical Skill Exams

Year 1-2

Competency Exams

Year 2-3

Remediation

Fail 2 or more

Dismissal

Fail (3)

Case Completion
- general dentistry
- periodontics
- endodontics

Conference Reports

NBDE Part I & II

Fail 2 or more
The Dental Licensure Objective Structured Clinical Examination (DLOSCE)

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Director-ADA Department of Testing Services

Wisconsin Dentistry Examining Board
September 6, 2017
Objective Structured Clinical Examinations (OSCEs)

- An **objective structured clinical examination (OSCE)** is a type of high-stakes examination widely used in the medical and health-related professions
  - competency assessment
  - licensure: medicine; dentistry (Canada)

- **format**: written, multiple-choice examination utilizing physical materials, such as radiographs, photographs, models, standardized patients, and order/prescription writing.

- Advances in simulated patient and haptic technologies suggest that simulations may be incorporated in OSCE’s sooner rather than later.
The Dental Licensure Objective Structured Clinical Examination (DLOSCE)

• Purpose:
  – measure whether a candidate for state licensure possesses entry-level clinical knowledge and cognitive skills, and the general clinical skills necessary for the safe and competent practice of dentistry. This knowledge includes the ability to recall important information from the clinical dental sciences.

• The preceding is accomplished through the use of a valid and reliable examination that has been professionally developed.

• A national exam
  – exam content will remain the same regardless of the region of the country where it is administered, and regardless of the curriculum implemented at different dental schools.
Why is the ADA Developing the DLOSCE?

• Ethical concerns-traditional, patient-based format
• Long-standing ADA policy
• Validity and reliability of patient-based exams
  – more evidence in support of the reliability and validity of OSCE results, as compared to results from traditional, patient-based exams
• Regional examination agencies not interested in working with the ADA to build a DLOSCE
• Over 75 years experience in high stakes examination development
Peer-reviewed literature on validity (since 2000)

Background

- The ADA’s Council on Dental Education and Licensure (CDEL) endorsed DLOSCE development to operationalize ADA policy
- The ADA/ADEA Joint Licensure Task Force endorsed DLOSCE development
- The ADA Board of Trustees (BOT) agreed with endorsements and approved funds to begin exam development in 2017
- The BOT also authorized formation of a DLOSCE Steering Committee, charged with the task of developing and validating the DLOSCE.
- It is anticipated that a pilot exam will be available in 2019, with deployment occurring in 2020.
DLOSCE Steering Committee

- DLOSCE Steering Committee includes the following:
  - Two (2) members of the ADA Board of Trustees
  - Two (2) members of the Council on Dental Education and Licensure, both of whom shall be general practitioners
  - Two (2) dentist educators with experience teaching comprehensive clinical dentistry
  - Two (2) current state dental board members who are practicing dentists
DLOSCE Steering Committee

• The DLOSCE Steering Committee will:
  • Identify and establish content areas and test specifications for the examination (using results from a practice analysis).
  • Establish general structure for the examination (number of stations) and permissible item formats (manikin, haptic feedback device, etc.).
  • Identify and contract with key vendors (e.g., technology, administration) in support of the examination.
  • Identify and establish test construction committee (TCC) structure.
  • Identify first state(s)/region(s) for the DLOSCE field test.
  • Identify an appropriate governance structure for DLOSCE administration
Final Thoughts

• The DLOSCE will serve as another tool state boards can use to help determine candidate qualifications for licensure
• Each dental board will make its own choice as to whether to use or not use the DLOSCE
• Current state acceptance
  – Colorado-no restrictions
  – Minnesota-UM graduates only
  – Washington-final regulations/rule-making, appears there will be no restrictions
• The development of the DLOSCE fully supports several communities of interest’s policies calling for the elimination of patients from the dental licensure examination process
• An ADA Council/Committee will ultimately NOT be the administrator of the DLOSCE
  – The ADA understands concerns regarding a potential conflict of interest
  – The governance solution identified by the DLOSCE Steering Committee will emphasize the importance of independent oversight