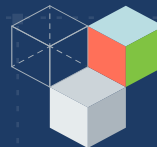




## CASE STUDY

# Protecting the Public

Using Groundbreaking 3D Modeling Technology To Create an Ethical, Valid Replacement for Current Dental Clinical Licensure Examinations



## Background.

The Joint Commission on National Dental Examinations (JCNDE) develops and administers the National Board Examinations (NBEs), a comprehensive set of dental and dental hygiene examinations that are used by dental boards across the U.S. to inform licensure decisions and help protect the public health. Through utilization of these valid, reliable and fair assessments of dental and dental hygiene knowledge, skills, and abilities, boards help to ensure that safe and effective patient care is provided only by qualified oral healthcare team members. The JCNDE partners with Prometric for comprehensive computer-based exam delivery services for the NBEs, leveraging the capabilities of the proprietary Prometric Assessment System.

## The Situation.

Dental board licensure decisions have traditionally relied in part on the assessment of candidate clinical skills via clinical board examinations, whereby candidates demonstrate their skills on live patients within the context of single encounter, patient procedure examinations and manikin examinations. The onset of COVID-19 highlighted ethical questions regarding this approach, as well as relevant considerations involving patient and practitioner safety. These examinations are administered and developed by external clinical testing agencies operating in various regions of the U.S.

## Overview

### Location

United States

### Challenge

The JCNDE sought to develop an innovative method of dental clinical skills evaluation that could serve as an ethical and valid replacement for current single encounter, patient procedure examinations and manikin examinations.

### Outcome

In partnership with Prometric, the JCNDE successfully launched the DLOSCE ahead of schedule, despite global complications arising from the COVID-19 pandemic. The DLOSCE was quickly accepted for clinical licensure purposes in six states, all within six months of its release. More states are expressing interest in adopting the DLOSCE, and the JCNDE welcomes further expansion of the DLOSCE.

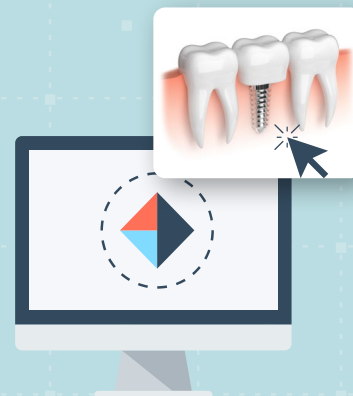
[www.ADA.org/DLOSCE](http://www.ADA.org/DLOSCE) and [www.ADA.org/JCNDE](http://www.ADA.org/JCNDE).

In response to the need for a more ethical and effective means of assessing the clinical skills of dental licensure candidates, the JCNDE sought a new way to accurately assess dentists' clinical skills, without the involvement of live patients. While initial development preceded the onset of the global COVID-19 pandemic, the impact of this public health emergency added urgency to the timeline to complete development, validation, and deployment of an exam to the field.

## Strategy.

The JCNDE launched a strategic initiative to leverage computer technologies in the assessment of clinical skills for dentists, developing a testing blueprint and operational requirements for a new Dental Licensure Objective Structured Clinical Examination (DLOSCE). The DLOSCE would be a content-valid examination built specifically for clinical licensure purposes, and would assess candidates' clinical judgment and skills without the need to involve live patients. After exploring and ruling out utilization of dental simulators and haptic feedback devices, in mid-2019 the JCNDE identified 3D modeling technology as representing the strongest mechanism for the assessment of candidate clinical skills in targeted areas of dentistry (e.g., restorative and prosthodontic procedures). The JCNDE partnered with Prometric to identify and secure the right technical resources to assist in the creation of this new content in a format that could be reliably delivered in a computer-based testing environment.

In just under a year, highly qualified teams of dental subject matter experts—working closely with skilled graphic artists—meticulously designed the lifelike computerized models required for rigorous skill measurement. These dental subject matter experts constructed questions to mirror situations in clinical practice with high fidelity. Approved content was then placed into a production environment in a pilot phase involving additional subject matter experts, to confirm the viability of the approach and ensure the end product met or exceeded the high standards established by the JCNDE.



**The new DLOSCE  
assesses  
clinical and  
judgement  
skills via  
lifelike  
computerized  
models,  
required for  
rigorous  
skills  
measurement.**

## Outcome.

Subject matter experts in charge of reviewing the DLOSCE were exuberant in their praise of this instrument, with several noting that it had exceeded their high expectations. This review coincided with the earliest days of the pandemic, before lockdowns were in place throughout the U.S. These subject matter experts judged that the DLOSCE was ready for deployment, and that its arrival would come not a moment too soon, at a time when it was sorely needed; administration of clinical licensure examinations involving live patients had ceased across the U.S. due to safety concerns. The new DLOSCE—with its advanced 3D-models presented in a controlled environment—was successfully implemented and administered across Prometric's U.S. test center network ahead of schedule in June 2020.

The exam's initial launch received significant positive feedback and thanks from candidates, as captured in post-administration candidate surveys. Comments ranged from appreciation for fast-tracking the exam during the COVID-19 pandemic, to highlighting the exam's more accurate assessment of clinical preparedness than is possible during a single-encounter patient experience.



**Dr. Kanthasamy Raganathan**

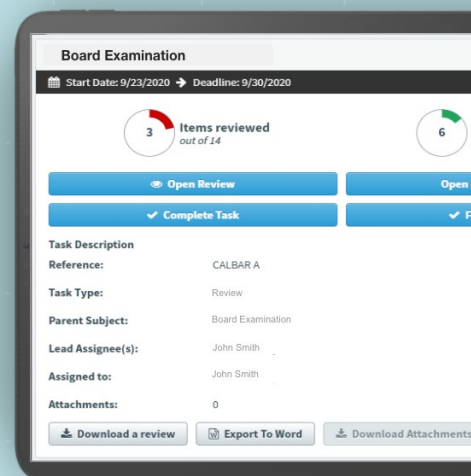
Chair of the JCNDE

The DLOSCE provides a comprehensive evaluation of the clinical judgment that is necessary to safely practice dentistry, advancing assessment technology and helping to address ethical concerns with current clinical licensure examinations. From our initial development through the first examination administration last June, the partnership with ***Prometric was instrumental in making the launch of the new DLOSCE a great success.***

## States that have accepted the new DLOSCE for licensure purposes:

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

*and growing!*





**Dr. David Waldschmidt**

Director of the JCNDE

By replacing actual patients with advanced 3D-models in a controlled, standardized environment, the new DLOSCE avoids many of the weaknesses and disadvantages of traditional clinical examinations, increases validity, and also significantly decreases the risk of exposure to COVID-19 and other airborne pathogens for all involved. ***The Prometric team's collaborative approach and willingness to work long hours to help expedite deployment of the DLOSCE played a vital role in making the launch a success.***

Within six months of its release, the DLOSCE was accepted for licensure purposes by six U.S. states, including Alaska, Colorado, Indiana, Iowa, Oregon, and Washington. Data collected to date suggest that the performance of the DLOSCE in predicting dental clinical performance far exceeds the levels found for current clinical licensure examinations, providing evidence that the DLOSCE can provide significant improvements in helping U.S. dental boards in their mission to protect the public. The JCNDE continues to provide boards and the public with data on the effectiveness of the DLOSCE program, with more states expressing interest in adopting the DLOSCE in their licensing procedures. This groundbreaking innovation has also garnered significant trade media interest, including articles published in outlets such as [Becker's Dental Review](#), [Dentistry Today](#), and [ADA News](#), the newspaper for the 163,000 dentist members of the American Dental Association.

## Learn More

Learn more about our Test Development and Delivery Solutions by visiting [www.prometric.com](http://www.prometric.com) or by calling toll-free [1-877-725-3708](tel:1-877-725-3708).

Prometric enables test owners worldwide to advance their credentialing programs through test development and delivery solutions that set the standard in quality and service excellence. Our unwavering commitment to service is evident in every encounter—through a remarkable track record of delivering consistently reliable assessments, accurate results, candidate convenience, testing flexibility, stringent security, and service innovation on a global scale.