

National Dental Examiners' Advisory Forum (NDEAF)

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June 26, 2019

Overview

- Welcome
- The purpose of the JCNDE
- The purpose of NDEAF
- The JCNDE and its activities
- Updates on the INBDE
- Updates on the National Board Examinations
- Q & A

Welcome

- In attendance today we have:
 - **Members of dental boards**
 - In person
 - Remote
 - **Members of the JCNDE**
 - In person
 - Remote
 - **Observers** from the AADB, ADA Board of Trustees, ADEA, ASDA, ADHA
 - **Department of Testing Services staff**, who support the JCNDE's examination programs

The Purpose of the JCNDE

- The JCNDE exists to provide information to dental boards to inform licensure decision concerning dental and dental hygiene candidates.
 - Dental boards have the critical task of using this information to understand whether a candidate has the skills necessary to safely practice.
 - The actions of dental boards are vital to the oral health and general health of the public.
- The JCNDE extends its thanks to dental boards and dental board members for their work in protecting the public health.
- The JCNDE appreciates the opportunity to be of service to boards, in providing important information concerning candidate qualifications for licensure.
- The JCNDE recognizes the importance of its task and shares dental boards concern for the protection of the public.

The Purpose of NDEAF

- NDEAF was created to encourage dialogue between the JCNDE and dental board members.
- The JCNDE's National Board Dental and Dental Hygiene Examinations are designed to help dental boards understand whether a candidate possesses the necessary cognitive skills to safely practice.
 - The content outline for these examinations is available online in Candidate Guides and Technical Reports.
 - Dental board members can use this material to understand the nature of the cognitive skill evaluation, and the validity evidence that supports use of these examinations.
- NDEAF provides an opportunity for the JCNDE to interact with board members in order to understand their unique perspectives and identify any areas for improvement concerning the National Board Examinations.

JCNDE Bylaws Duties

The JCNDE Bylaws indicate that the duties of JCNDE are:

- to provide and conduct examinations to assist state boards in determining qualifications of dentists and dental hygienists who seek licensure.
- to make rules and regulations for the conduct of National Board Examinations and certificates.
- to serve as a resource for the dental profession in the development of examinations.

JCNDE Current Mission Statement*

The JCNDE develops and conducts highly reliable, state of the art cognitive examinations that assist regulatory agencies in making valid decisions regarding licensure of oral health care professionals, develops and implements policy for the orderly, secure, and fair administration of its examinations, and is a leader and resource in assessment for the oral health care profession.

*the JCNDE will be voting on a resolution to update their Mission Statement during their 2019 Annual Meeting later today

The JCNDE is a Commission of the ADA

- Philosophical foundation of Commissions:
 - Consistent and free from bias/conflict of interest to remain objective.
 - No single community of interest can have undue influence in the decision-making process, including the ADA.
 - Quality assurance is necessary to protect the public and assure long-term viability of the profession.
 - Integrity, confidentiality, due process.
- Subject to ADA Bylaws and Standing Rules, while maintaining own Bylaws and Rules in accordance with mission and with HOD approval.
- **Commissions maintain independent authority to carry out their program.**

Composition of the JCNDE

Appointing Organizations	Number of Members	Term Lengths (in years)
Voting Members		
AADB	6	4
ADEA	3	4
ADA	3	4
ADHA	1	4
ASDA	1	1
Public	1	4
Non-voting Members		
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

AADB (6)	Roy L. Irons, DDS Frank A. Maggio, DDS William F. Robinson, DDS (JCNDE Chair) R. Michael “Mike” Sanders, DMD Wesley Delaine Thomas, DMD Leonard P. Weiss, DDS
ADA (3)	Cheryl Haley, DDS Michael E. King, DDS Kanthasamy K. Ragunathan, DDS, MS
ADEA (3)	Cataldo W. Leone, DMD, DMSc, FICD Nader Nadershahi, DDS, MBA, EdD Joseph J. Zambon, DDS, PhD
ADHA (1)	Joanna Allaire, RDH, MDH
ASDA (1)	Jeffrey Kerst, DDS
Public (1)	Douglas C. Wilson, Ph.D.
Liaisons & Observers	Brandon Rensch, BS (ASDA Observer) Linda K. Himmelberger, DMD (ADA Board Liaison) Liaisons and observers do not participate in voting

Key Points

- The composition of the JCNDE reflects the important perspectives that must be considered in the building and implementing of National Board Examinations, with particular emphasis given to dental boards.
- The JCNDE has a long track record of helping dental 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 cognitive skills necessary to safely practice.
- The Integrated National Board Dental Examination benefits from and will help continue this strong record of performance

JCNDE 2018 Meeting-Major Actions



EXAMINATIONS

INBDE

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Unofficial Reports of Major Actions

The documents below provide a source of information for members and communities of interest and include other major actions approved and revisions adopted at Joint Commission meetings.

- [Download Unofficial Actions from June 2018 meeting](#) (PDF)
- [Download Unofficial Actions from June 2017 meeting](#) (PDF)
- [Download Unofficial Actions from June 2016 meeting](#) (PDF)
- [Download Unofficial Actions from April 2015 meeting](#) (PDF)

<https://www.ada.org/en/jcnde/news-resources/unofficial-reports>

Strategic Initiatives

- Focus on JCNDE communications and increasing stakeholder engagement
- Implementation of the Integrated National Board Dental Examination (INBDE)
- Improvements to scoring precision, increasing the accuracy in understanding whether a candidate possesses the necessary level of skills to safely practice
 - Investigation into the feasibility of utilizing the three parameter logistic model (3-PL) for use in the National Board Dental Hygiene Examination (NBDHE)
- Improvements to measurement and test security
 - Investigation into the feasibility of multi-stage adaptive testing

DTS implements the National Board Exams

Examination Content, Scoring, Analysis, New Development

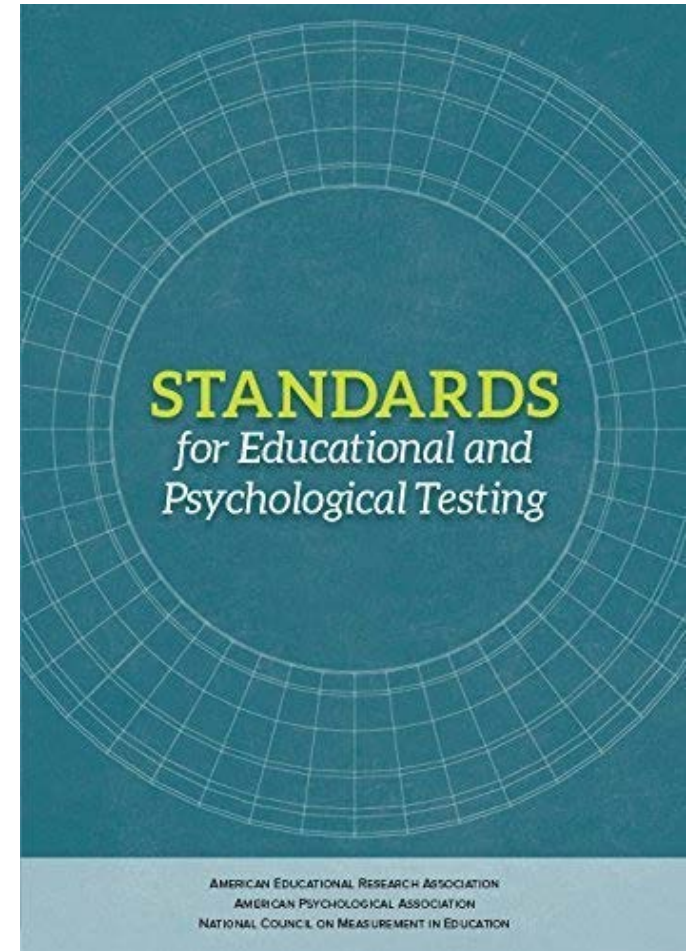
<p>Test Development</p> <p>Conducts Test Construction Team (TCT) meetings for seven examination programs (80+ meetings annually)</p>	<p>Research & Development - Psychometrics</p> <p>Oversees analysis and scoring of examinations (45,000+), professional investigations, and technical publications in support of examination programs</p>	<p>New Psychometric Development & Innovations</p> <p>Provides psychometric support in the development of new testing programs.</p>
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DTS Operations

<p>Test Administration</p> <p>Oversees application processing and test vendor administrations (40,000+ examinations)</p> <p>Responds to phone calls, live chats, emails, faxes (nearly 70,000 annually)</p> <p>Resolves testing day problems</p>	<p>Test Security and Fraud Prevention</p> <p>Monitors test security policies, procedures, irregularities and candidate appeals; risk assessment</p>	<p>Communications</p> <p>Provides communications for stakeholders and communities of interest</p>
<p>Client Services/Special Projects</p> <p>Project management and services to outside clients</p>	<p>Volunteer and Meeting Coordination</p> <p>Oversees volunteer activities and meeting logistics for TCT and governance meetings.</p>	

The Standards for Educational and Psychological Testing

- The *Standards* were developed by the American Educational Research Association (AERA), American Psychological Association (APA), and the National Council on Measurement in Education (NCME).
- The *Standards* provide considerations for developing, implementing, and evaluating tests.
- The *Standards* and industry best practices help guide JCNDE and DTS activities as it designs, constructs, and implements the assessments under its care.
- The JCNDE's primary focus is on validity, the evidence that supports the interpretation and use of NBE results



Standard Setting

- The National Board Examinations are criterion-referenced and not norm-referenced examinations.
- Subject matter experts identify standards (pass/fail points) following established procedures and criteria that reference specific skill level requirements, NOT by the process sometimes known as “grading on a curve.”
 - All candidates who demonstrate the necessary skill level through their examination performance will pass the examination (it is NOT the case that scoring is established to fail a certain percentage of examinees).
 - All candidates who do NOT demonstrate the necessary skill level through their examination performance will fail the examination
- Based on standard setting activities, the JCNDE has recently INCREASED STANDARDS across all of its examination programs.
- The new standards for the NBDE Part I, NBDHE, and NBDE Part II were separately reviewed & approved by the Joint Commission, and implemented in November 2016, January 2017, and March 2017, respectively.

Image Portal



EXAMINATIONS

INBDE

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Test Item Development Guide

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Image Portal

Welcome and thank you for your interest in the Image Portal. The Joint Commission on National Dental Examination's (JCNDE) image portal allows dental professionals to submit potential case materials (e.g. radiographs, intra/extra oral photographs, dental charts) for possible use in the development of high-stakes dental and dental hygiene examination questions. The JCNDE appreciates your contribution to the profession and the assessment of future dental professionals.

To enter the image portal your DENTPIN is required.

[IMAGE PORTAL ▶](#)

<https://www.ada.org/en/jcnde/examinations/test-construction/case-materials>

Volunteer Test Constructor Pool

Volunteer Test Constructor Information

The Department of Testing Services (DTS) seeks volunteer subject matter experts (SMEs) to serve as test constructors in support of critical examination programs. [Apply below](#). **The application deadline for 2020 is Friday, February 8.**

DTS, a shared service of the ADA, provides professional psychometric and test development services for high stakes testing programs in dentistry and healthcare. DTS develops and implements licensure and admission testing programs under the purview of the Joint Commission on National Dental Examinations (JCNDE), the American Dental Association (ADA) Board of Trustees, the ADA Council on Dental Education and Licensure (CDEL), and the Association of Schools and Colleges of Optometry (ASCO).

The following examinations rely on volunteer subject matter experts:

Joint Commission on National Dental Examinations:

[National Board Dental Examination \(NBDE\) Part II](#)

[National Board Dental Hygiene Examination \(NBDHE\)](#)

[Integrated National Board Dental Examination \(INBDE\)](#)

American Dental Association

[Dental Licensure Objective Structured Clinical Examination](#)

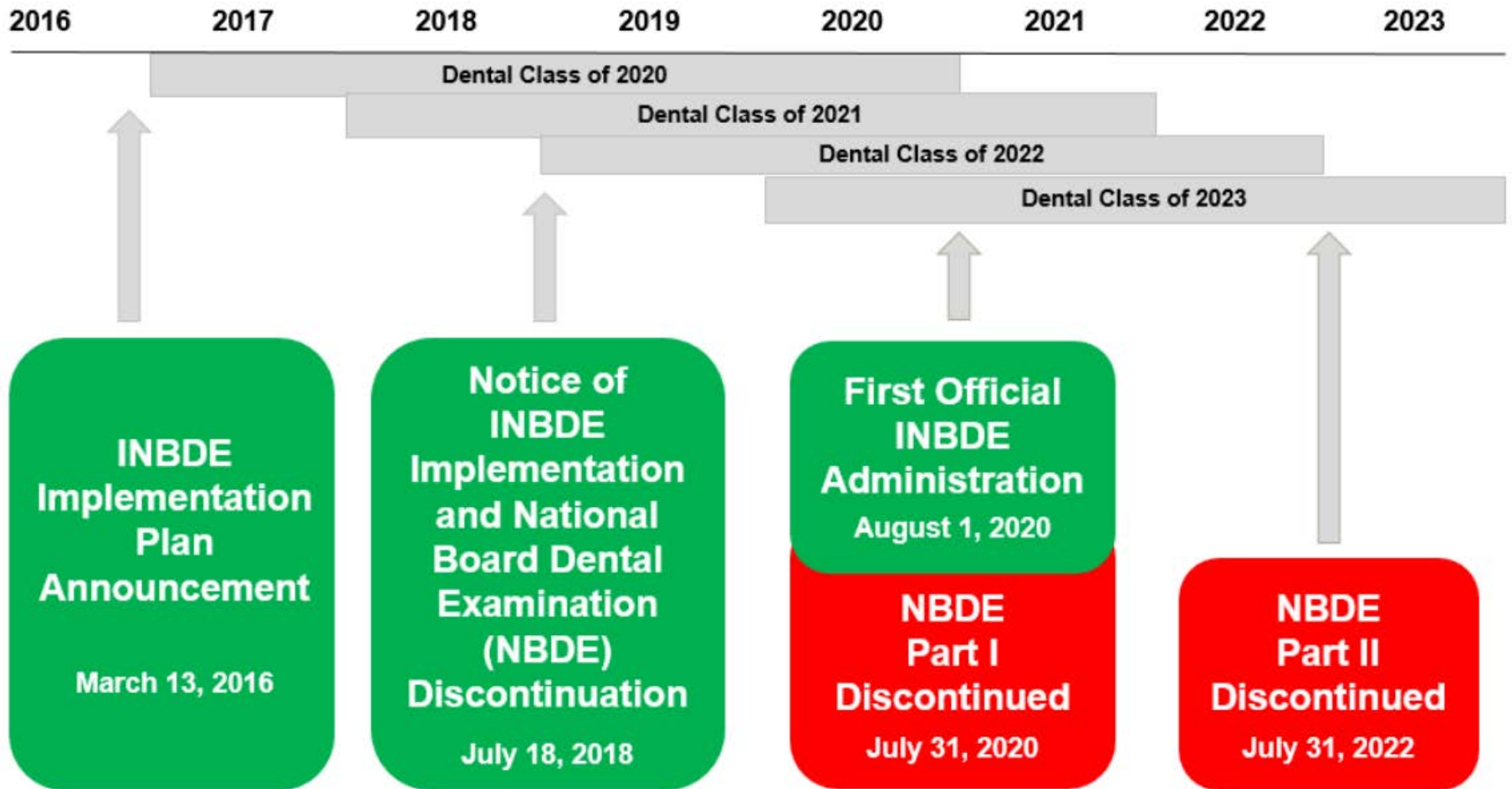
<https://www.ada.org/en/education-careers/admission-tests-and-dental-exams/test-construction-information>

Update on the
Integrated National Dental
Board Examination
(INBDE)

The INBDE

- In 2009, the JCNDE appointed a Committee for an Integrated Examination (CIE) to develop and validate a new examination instrument for dentistry that integrates the biomedical, behavioral, and clinical sciences to assess entry level competency in dental practice, to supplant NBDE Part I and Part II.
- The Integrated National Board Dental Examination (INBDE) retains the same fundamental purpose as NBDE Part I and Part II – to assist state boards of dentistry in determining qualifications of dentists who seek licensure to practice in the U.S.
- The INBDE was designed from the ground up to focus on clinical relevance.
- Development and implementation of the INBDE has been an historical undertaking for the JCNDE.

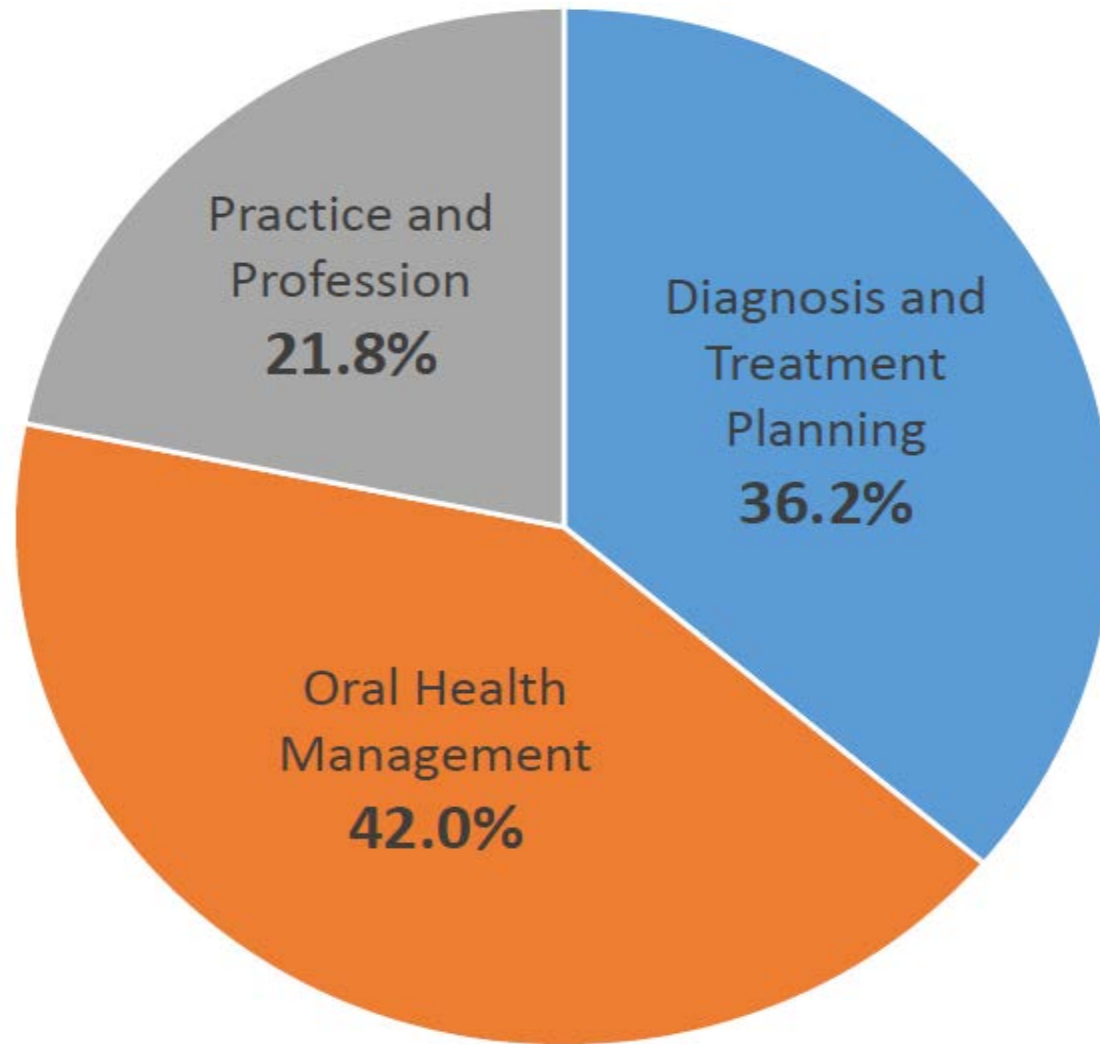
INBDE Implementation Plan (Final)



The Domain of Dentistry

- The Joint Commission has established 56 “clinical content areas” that represent the tasks entry-level general dentists must be able to perform to practice safely.
- The 56 clinical content areas are classified into three clinical component sections:
 - 1) Diagnosis and Treatment Planning
 - 2) Oral Health Management
 - 3) Practice and Profession
- The JCNDE also adapted 10 Foundation Knowledge Areas from medicine, to represent the knowledge, skills, and abilities necessary to perform the aforementioned tasks.
- Feedback from stakeholders and communities of interest was solicited and incorporated into the framework.

INBDE Content by Clinical Component Section (2018)



INBDE Content Specifications (2018)

INBDE Content by Foundation Knowledge Area

#	Foundation Knowledge Area	Percent
1	Molecular, biochemical, cellular, and systems-level development, structure and function	12.2%
2	Physics and chemistry to explain normal biology and pathobiology	6.8%
3	Physics and chemistry to explain the characteristics and use of technologies and materials	8.0%
4	Principles of genetic, congenital and developmental diseases and conditions and their clinical features to understand patient risk	10.6%
5	Cellular and molecular bases of immune and non-immune host defense mechanisms	9.0%
6	General and disease-specific pathology to assess patient risk	11.8%
7	Biology of microorganisms in physiology and pathology	10.6%
8	Pharmacology	10.6%
9	Behavioral sciences, ethics, and jurisprudence	10.6%
10	Research methodology and analysis, and informatics tools	9.8%

Guiding Principles in INBDE item development

- Examination purpose drives all development decisions.
 - *Does the candidate possess the level of dental skills necessary to safely practice?*
- Focus rests on clinical relevance. Integration provides a means of achieving clinical relevance
- Promote the clinical relevance of the biomedical sciences by placing foundation knowledge areas within the context of clinical content areas.
- Increased focus on the general dentist in item writing.
- Standardized presentation format and conventions for presenting information.
- Direct and concise wording that focuses examinees on the concept tested as opposed to language/item wording.
- Increased accuracy, validity, and fairness/sensitivity through a thorough, multi-faceted item development and review process that capitalizes on the unique expertise of the individuals involved.

INBDE Quick Facts

- **Administration:** The INBDE will contain 500 questions and require 1½ days to administer
 - Administrations will occur at professional testing centers located throughout the US and Canada
 - The cost of administration will be communicated in November/December 2019
- **Candidate Results:** INBDE results will be reported as Pass/Fail
 - For remediation purposes, candidates who fail the examination will be provided with information concerning their performance in the major INBDE topic areas
- **School Results:** Candidates' pass/fail status will be reported to dental schools through the DTS Hub. Monthly and annual school reports will also be available through the DTS Hub
- **State Board Results.** Candidates' pass/fail status will be reported to state boards through the DTS Hub
 - The DTS Hub will indicate whether a candidate has met or not met the National Board Dental Examination cognitive skills requirements for dentistry (i.e., no distinction will be made among Part I, Part II, or the INBDE)

INBDE Quick Facts

- Candidates should contact the dental boards of each state to understand state requirements and the acceptability of the INBDE
 - With respect to administration timing, the JCNDE has received informal feedback from board members suggesting a general preference for candidates to complete the examination in close proximity to when they are applying for licensure
- The INBDE Retest Policy is available online:
http://www.ada.org/~media/JCNDE/pdfs/inbde_retest_policy_and_eligibility.pdf?la=en
 - Candidates who have passed may not retake the examination unless required by a state board or relevant regulatory agency
 - Under the JCNDE's 5 Years/5 Attempts Eligibility Rule, candidates must pass the examination within a) five years of their first attempt or b) five examination attempts, whichever comes first. *****NEW***** Subsequent to the fifth year or fifth attempt, failing candidates may test once every 12 months after their most recent attempt.
- Additional Resources
 - Sample INBDE questions are available here:
http://www.ada.org/~media/JCNDE/pdfs/INBDE_practice_questions.pdf?la=en
 - Additional information about the INBDE is available at <http://www.ada.org/jcnde/inbde>

The INBDE will be available for administration on August 1, 2020.

The NBDE Part I will be discontinued July 31, 2020

The NBDE Part II will be discontinued July 31, 2022

Update on the National Board Examinations

NBDE Part I

NBDE Part II

NBDHE

NBDE Test Administration and Fees

- Electronic process; six-month eligibility. Monitor website for upcoming enhancements.
- Administered nationwide at Prometric Test Centers, any business day.
- Approximately 373 professional level testing centers in North America with 6,073 available seats.
- Secure test environment. Biometric check-in. Video monitoring.

prometric.com

2019 Fees	
NBDE Part I Official reporting to candidate and dean of accredited dental school. Candidate report is sent to the address on application.	\$425
NBDE Part II Official reporting to candidate, dean of accredited dental school, and three licensing boards if requested on application. Candidate report is sent to the address on application.	\$475
Additional Score Report Recipients not selected on application.	\$40
Audit Request	\$65
National Board Certificate with Optional Frames Available upon successful completion of NBDE Part I and Part II.	See JCNDE website

NBDHE Test Administration and Fees

Administration

- Electronic registration process; six-month eligibility. Monitor website for upcoming enhancements.
- Administered nationwide at Pearson VUE Test Centers, any business day.
- About 3,540 available seats in 259 professional level testing centers.
- Secure test environment and video monitoring.

2019 Fees

NBDHE Fee includes official reporting to candidate, program director of accredited dental hygiene school, and 3 licensing boards if requested on application. Candidate report is sent to address on application.	\$440
Additional official report Fee for recipients not selected at time of application.	\$40
Audit Request	\$65
National Board Certificate with Optional Frames Available upon successful completion of NBDHE.	See JCNDE website

Retesting

90-day wait required between retests.

Candidates who pass the National Boards may not retest unless required by a state board or relevant regulatory agency.

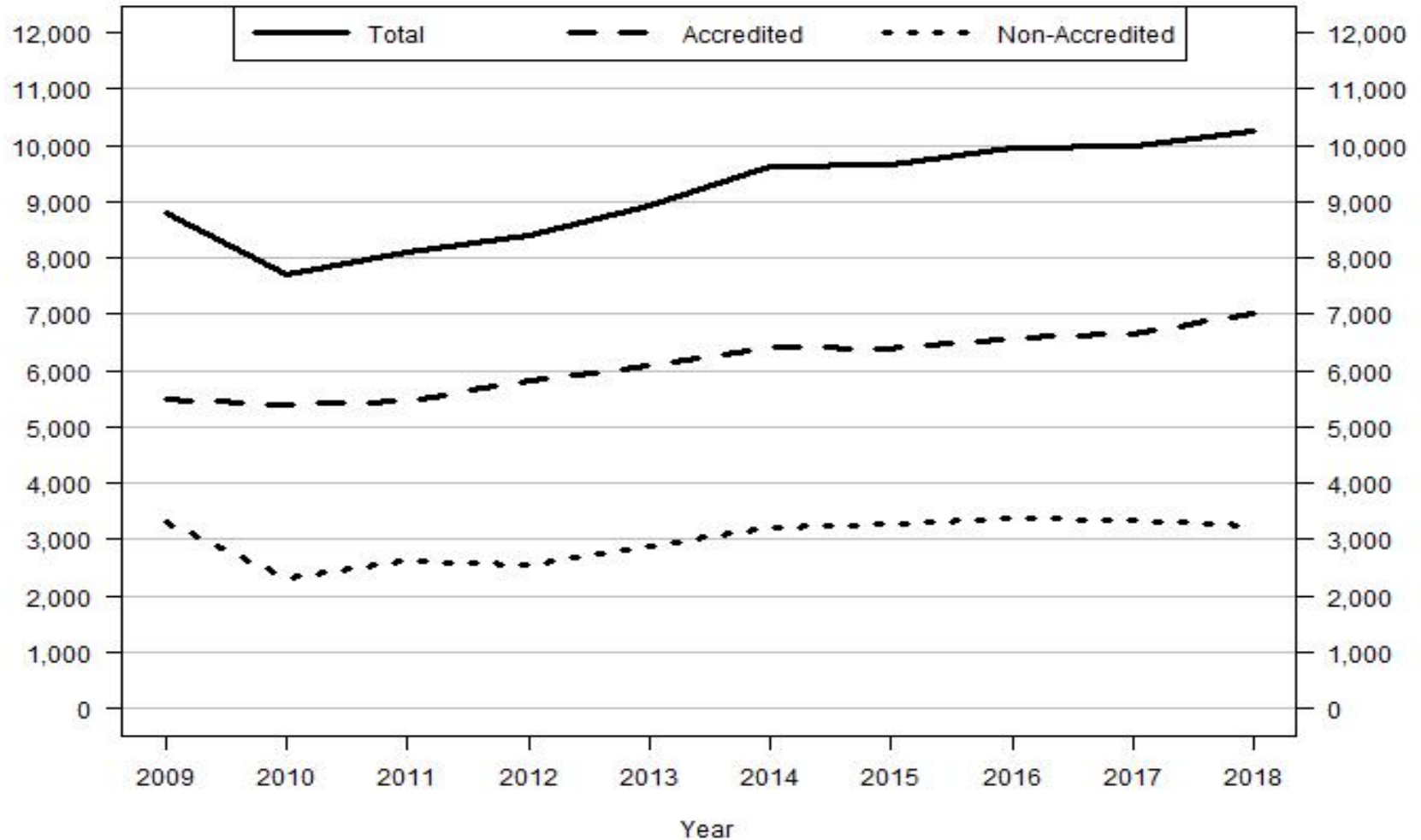
If a candidate cannot pass the examination within five years of their first attempt or five examination attempts, they are thereafter limited to taking the exam once every 12 months after their most recent attempt. This applies to examination attempts on or after January 1, 2012.

NBE Purpose and Interpretation

- The purpose of the National Board Examinations (NBE) is to assist state boards in determining the qualifications of individuals seeking licensure to practice.
- The NBE are used to determine whether a candidate possesses the minimally acceptable level of knowledge, cognitive skills, and ability that is necessary for safe, entry-level practice:
 - Dentistry (NBDE)
 - Part I: Anatomic sciences, biochemistry-physiology, microbiology-pathology, and dental anatomy & occlusion.
 - Part II: Dental and clinical dental sciences.
 - Dental Hygiene (NBDHE)
 - Scientific basis for dental hygiene practice, provision of dental hygiene services, community health and research principles.

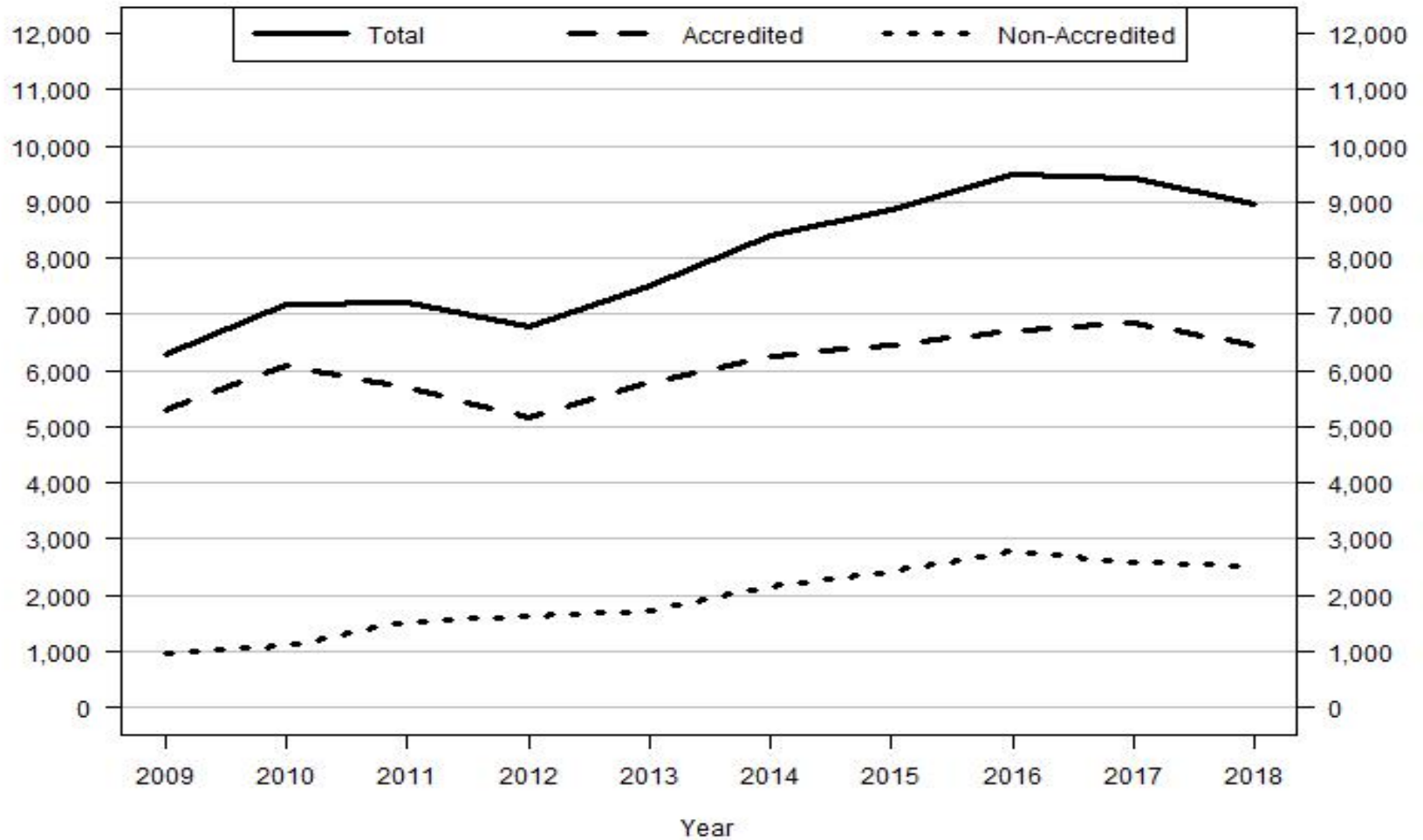
NBDE Part I Administrations (2009-2018)

Figure 1: NBDE Part I Administrations (2009-2018)



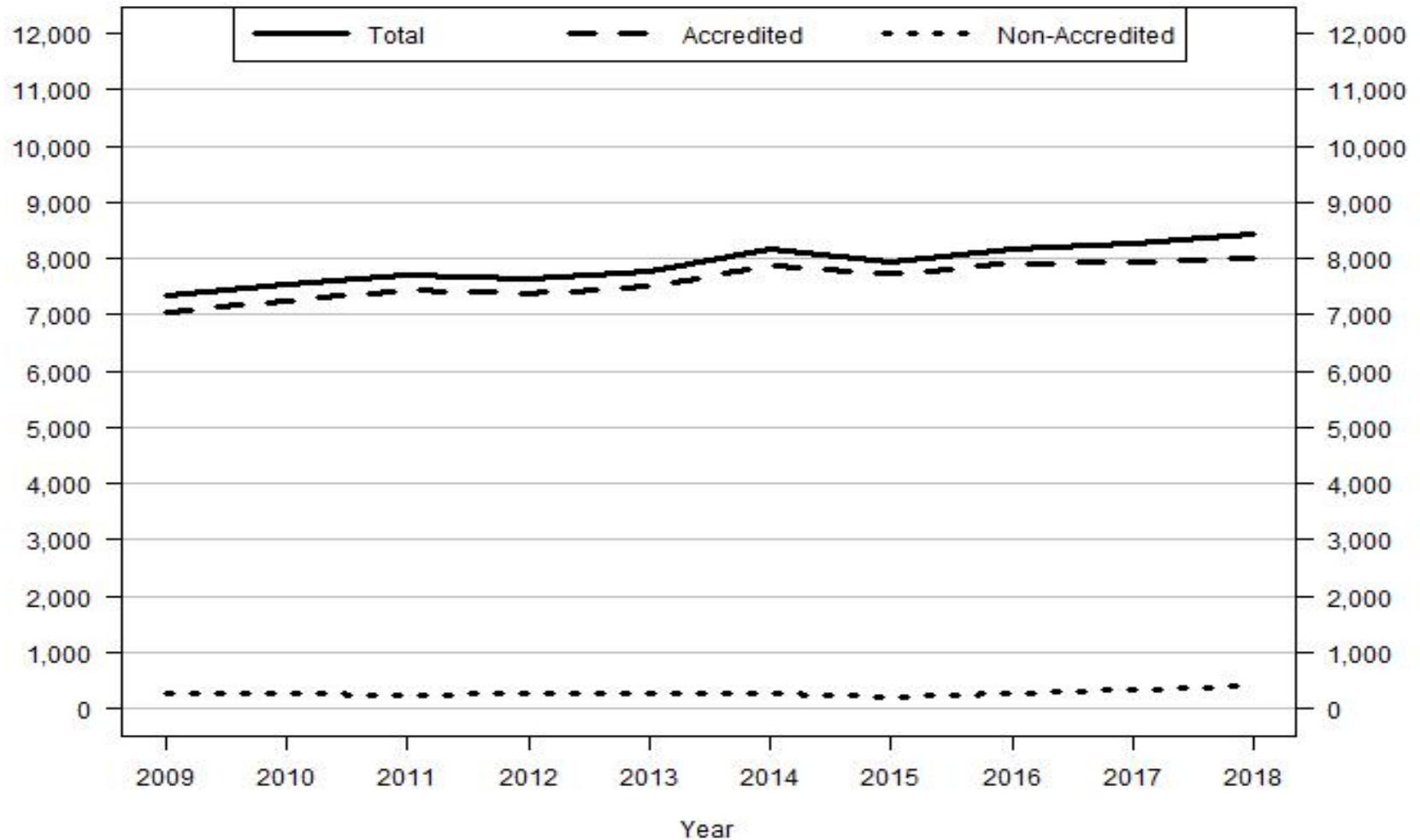
NBDE Part II Administrations (2009-2018)

Figure 2: NBDE Part II Administrations (2009-2018)



NBDHE Administrations (2009-2018)

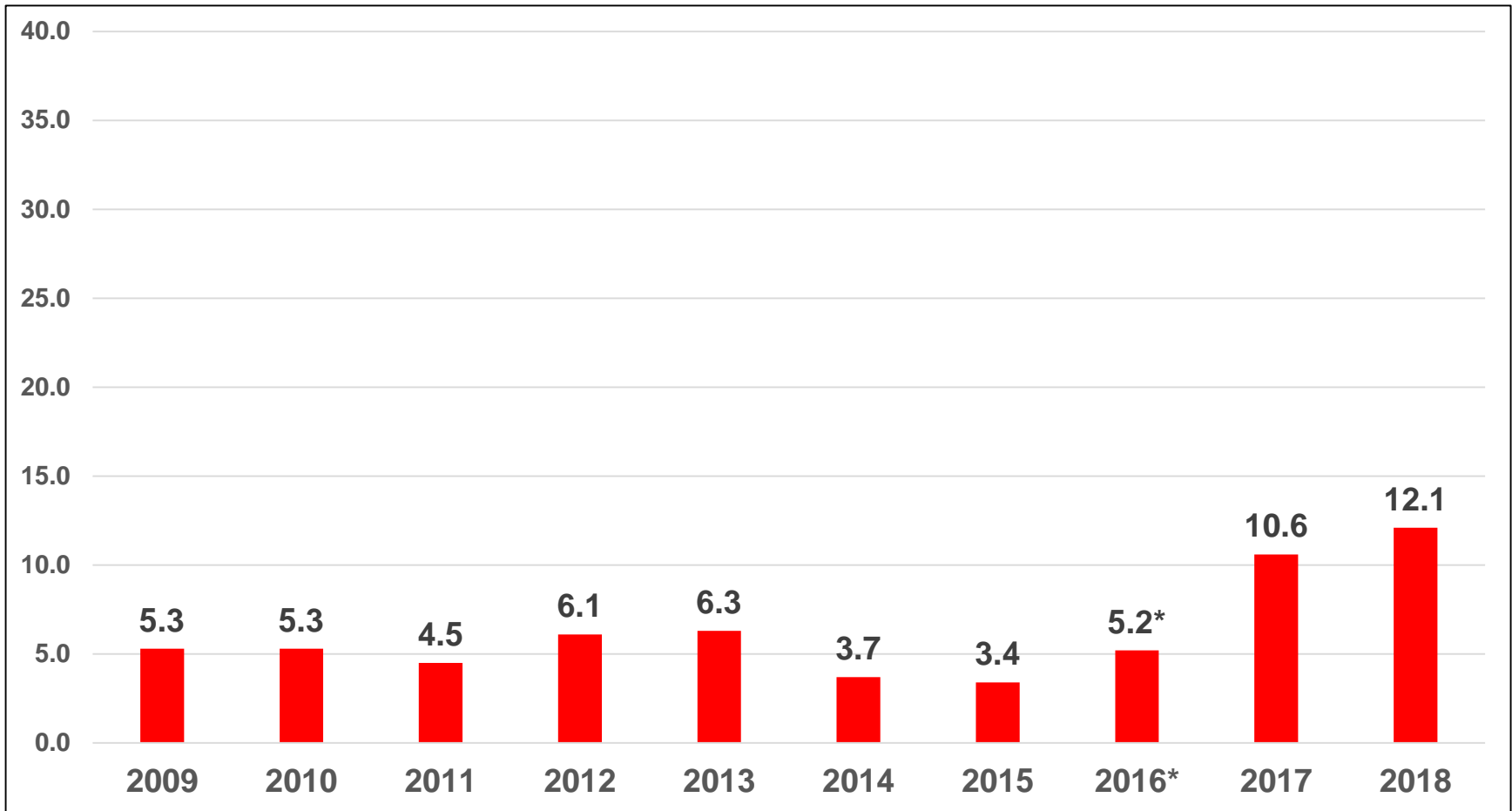
Figure 3: NBDHE Administrations (2009-2018)



Standard Setting

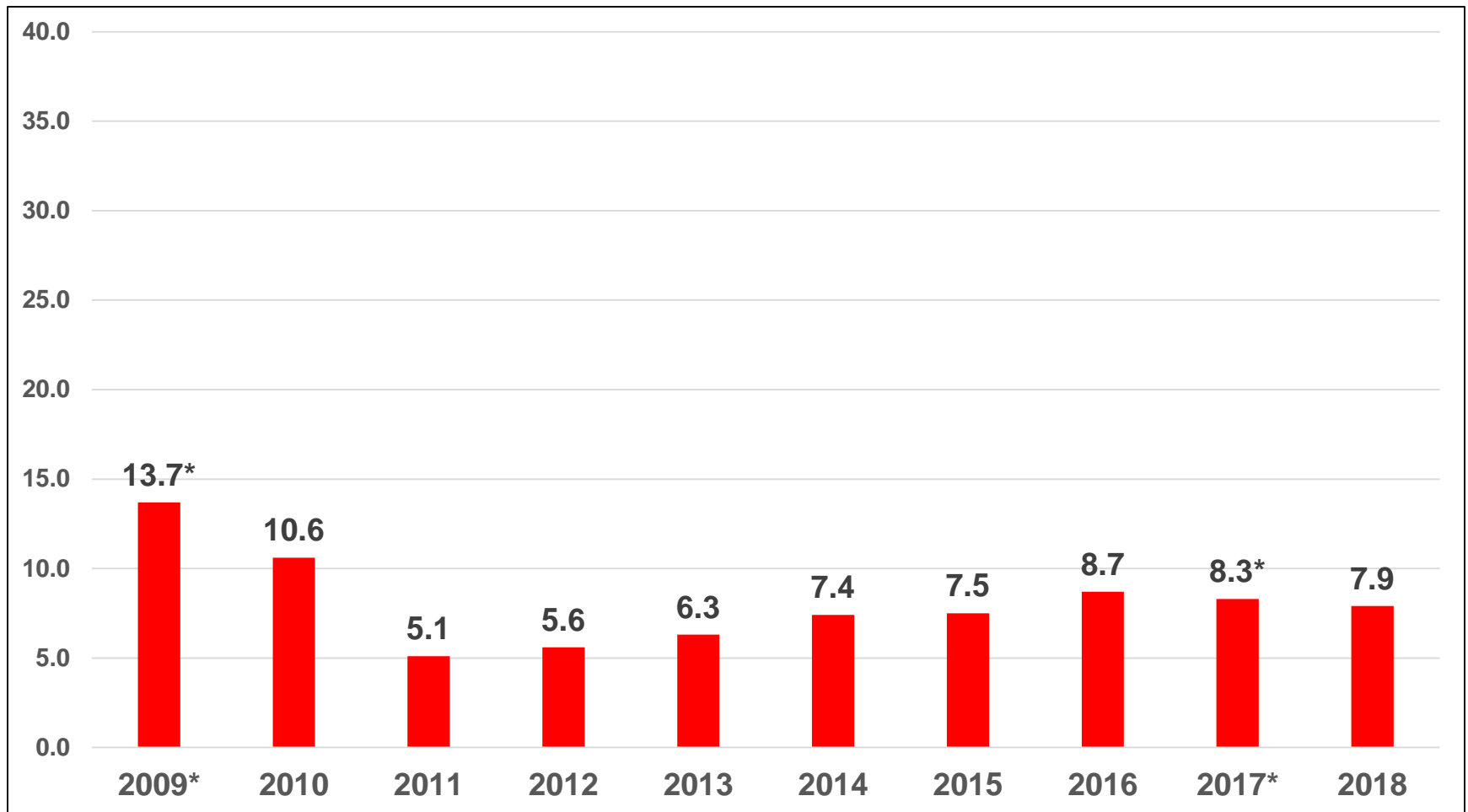
- Part I, Part II, and the NBDHE are criterion-referenced examinations (not norm-referenced).
- Panels of expert educators and practitioners identify standards (pass/fail points or “cut scores”) following established procedures and criteria, not by the process sometimes known as “grading on a curve.”
- Standards are maintained across examination forms through equating procedures that control for any subtle differences in difficulty across examination forms.
- Recent standard setting activities implemented in 2016 and 2017 for all NBE programs were facilitated by Dr. Gregory Cizek, a nationally recognized expert in standard setting who has authored several books on the subject (Cizek 2001, 2012; Cizek & Bunch, 2007).
- Communication regarding upcoming changes to standards began in 2015.
- At the conclusion of all activities, participants’ evaluations of all aspects of the process were uniformly strong and supportive, with each panelist supporting the final group-recommended performance standard.

NBDE Part I Failure Rates (%)



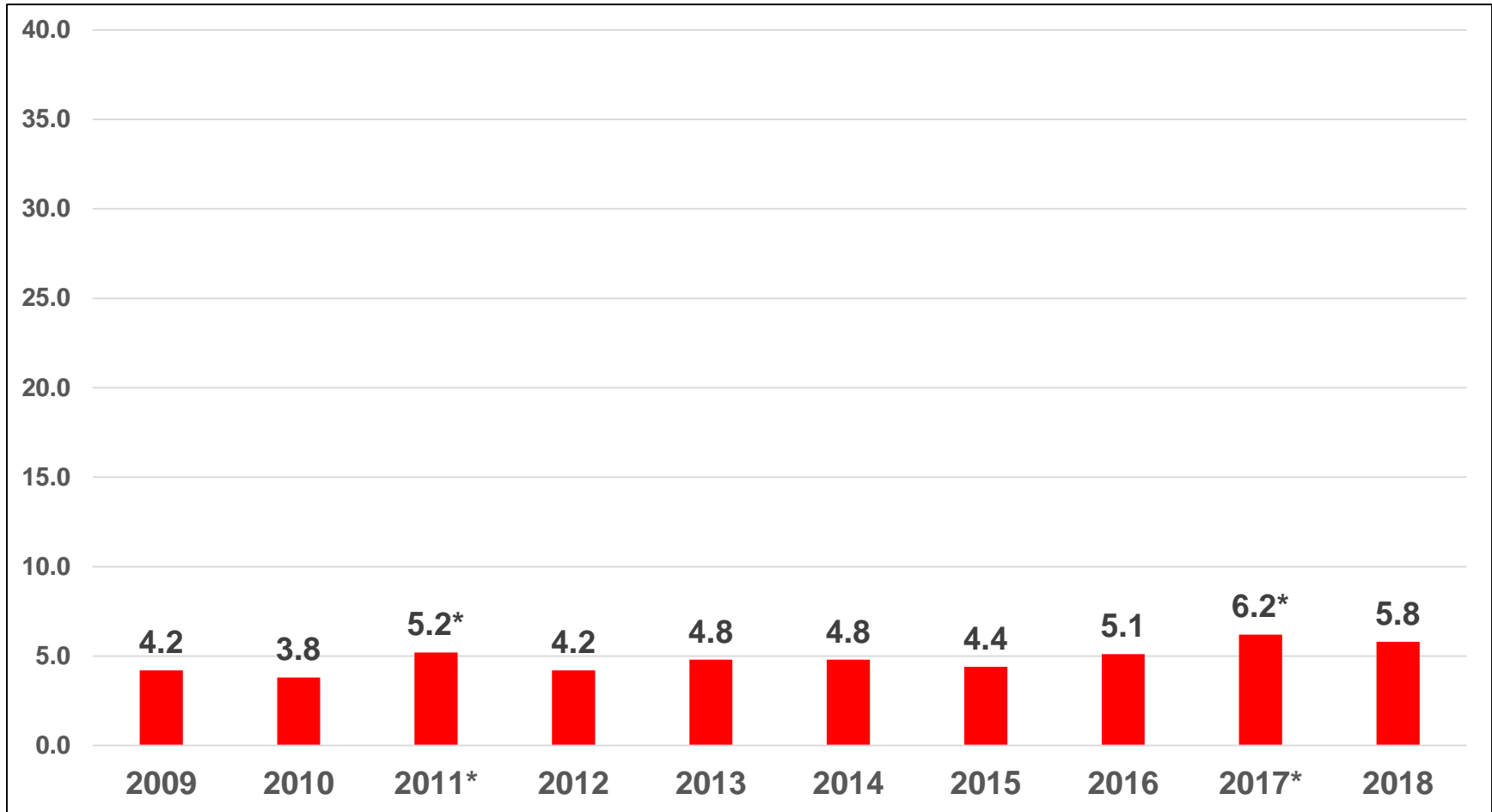
* A new standard was introduced this year, based on updated standard setting activities.

NBDE Part II Failure Rates (%)



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

NBDHE Failure Rates (%)



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

Results Reporting for NBDE Part II and NBDHE

- National Board Examinations are intended for use by dental boards in licensure decision making.
- Pass/fail decisions are made on the basis of overall performance, not subscales.
- The National Boards are NOT intended for diagnostic purposes, but nonetheless the JCNDE endeavors to provide meaningful diagnostic information to failing candidates.
- Results reports for failing candidates are intended to help these individuals understand their relative performance in the different disciplines, so they can develop an appropriate remediation plan before attempting the examination again.
- These results can be challenging to interpret, for a variety of reasons.
- In 2018, the JCNDE provided improvements to results reporting for candidates who failed NBDE Part II; a similar effort is now underway for the NBDHE.

BEFORE: Report for Failing NBDE Part II Candidates

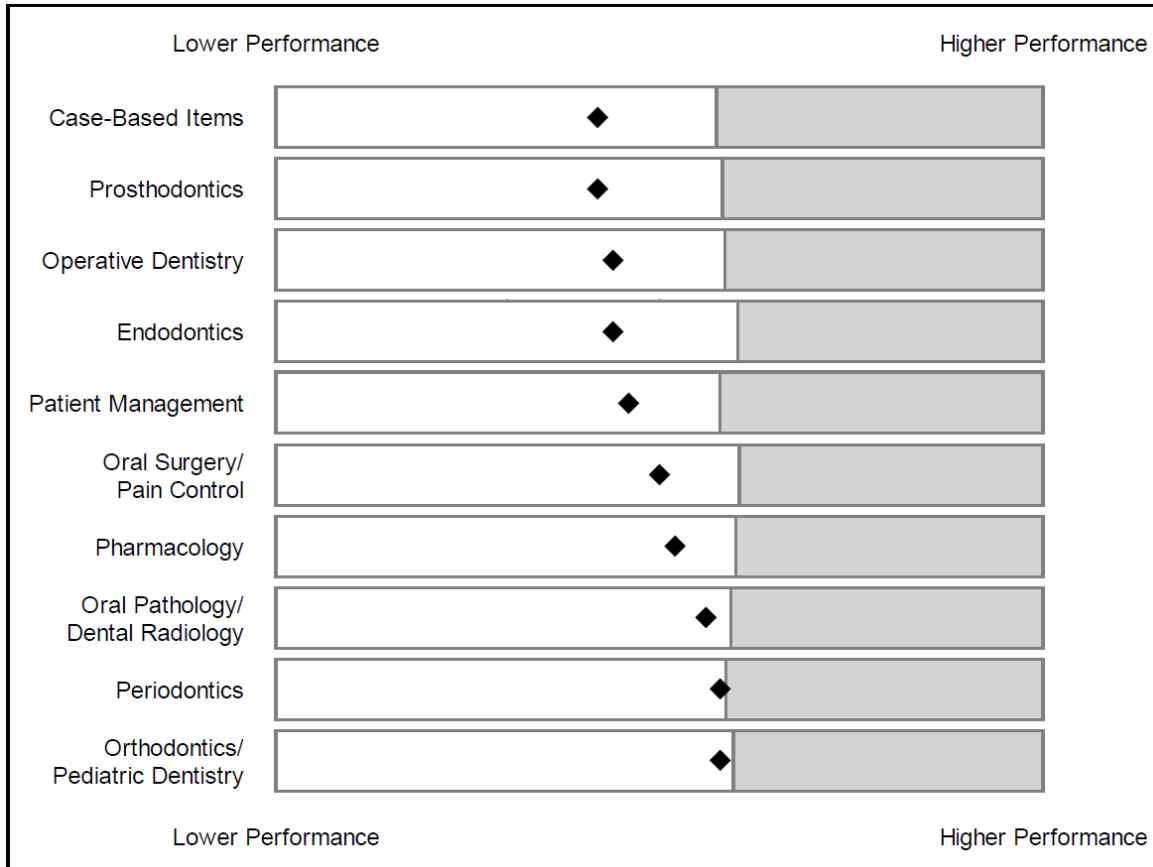
- Reporting prior to October 2018

Score Result Detail

Name: Doe, John
Exam: NBDEII
Exam Date: 6/6/2016
Status: Fail
Score: 74

Discipline/Area	# Correct	# of Questions	National Average
Operative Dentistry	33	63	42.8
Pharmacology	29	42	29.6
Prosthodontics	31	57	41.3
Oral Surgery/Pain Control	34	55	37.5
Orthodontics/Pediatric Dentistry	43	63	47.0
Endodontics	25	38	28.4
Periodontics	43	59	45.7
Oral Pathology/Dental Radiology	44	64	43.8
Patient Management	35	59	43.0
Case-Based Items	56	100	71.2

AFTER: Report for Failing NBDE Part II Candidates



The graphic shows how a candidate performed overall and in each NBDE Part II discipline. The black diamonds represent performance in each area indicated. If a diamond is within the white region, the candidate performed *below* the national average. If a diamond is within the gray region, the candidate performed *above* the national average.

* The JCNDE approved proposed change in June 2018. The new score report was implemented in October 2018.

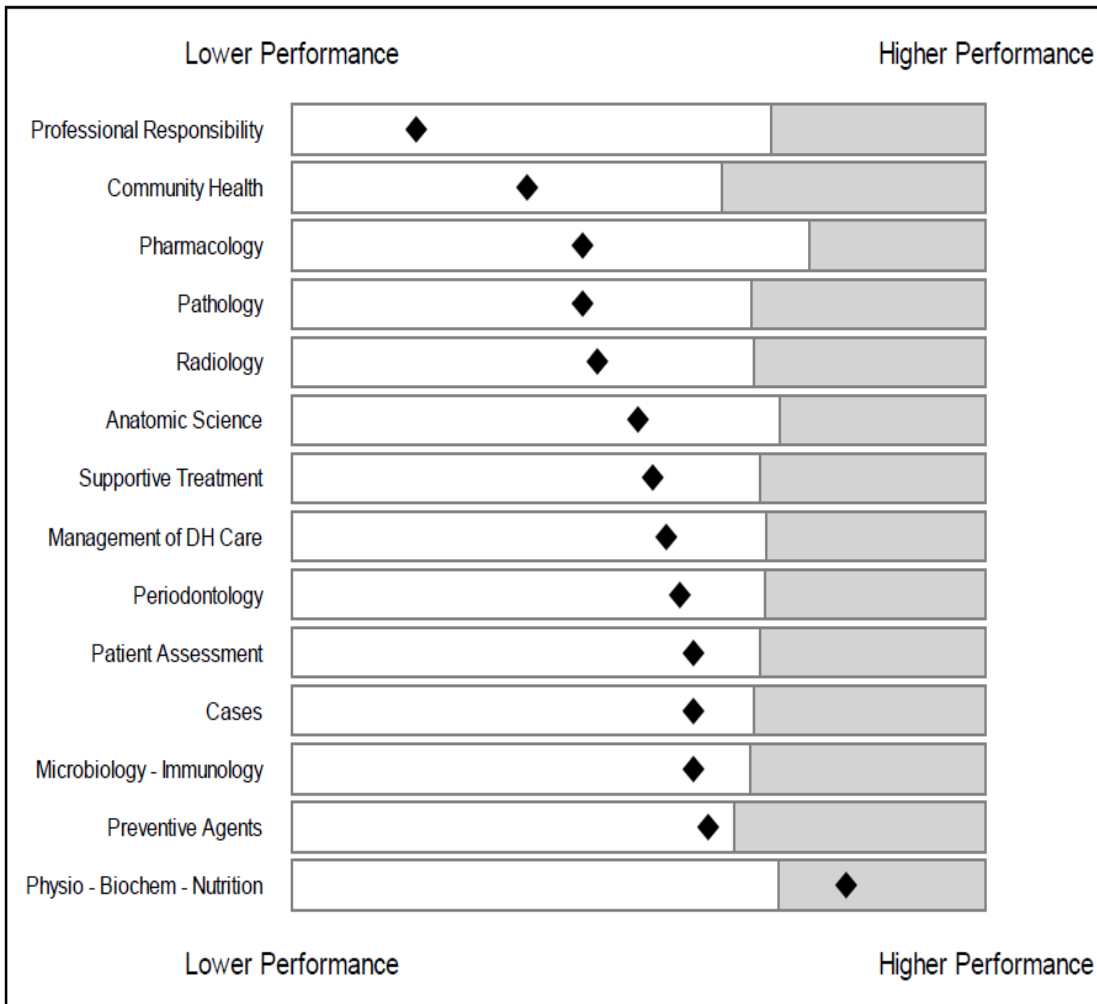
CURRENT: Report for Failing NBDHE Candidates

Score Result Detail

Name: [REDACTED]
Exam: NBDHE
Exam Date: 01/11/2019
Status: Fail
Score: 74

Discipline/Area	# Correct	# of Questions	National Average
Anatomic Science	8	17	10.6
Physio - Biochem - Nutrition	7	11	7.1
Microbiology - Immunology	5	10	6.5
Pathology	6	13	8.4
Pharmacology	9	9	6.9
Patient Assessment	46	77	52.8
Radiology	34	66	42.2
Management of DH Care	27	46	44.2
Periodontology	15	25	18.9
Preventive Agents	11	17	9.4
Supportive Treatment	10	13	7.9
Professional Responsibility	18	22	15.0
Community Health	14	24	14.9
Cases	91	150	107.7

PROPOSED: Report for Failing NBDHE Candidates*



The graphic shows how a candidate performed overall and in each NBDHE discipline. The black diamonds represent performance in each area indicated. If a diamond is within the white region, the candidate performed *below* the national average. If a diamond is within the gray region, the candidate performed *above* the national average.

* The JCNDE will consider this proposed change in June 2019.

Testing Irregularities and Appeals

Definition of Irregularity: A question has emerged about the validity of test results accurately reflecting the ability and skills of a candidate.

Reasons for withholding scores include, but are not limited to:

- Unusual answer patterns.
- Atypical score increases from one testing attempt to another.
- Inconsistent performance on different parts of test.
- Improper access to secure test content.
- Test administration irregularity.
- Falsification of personal identification, application information or supporting documents.
- Violation of rules and regulations.
- Falsification of official report.
- Information indicating the results might not be valid.

Irregularity detection and investigation:

- Report of irregularity received from testing vendor or miscellaneous source (e.g., anonymous tips, routine audit procedures).
- Investigation conducted.
- Action determined (e.g. withhold score or retest restriction).

Notification/Appeal Process

- Candidate notified; 30 days to submit appeal.
- Appeal forwarded to Chair.
- Chair grants, denies, or forwards appeal to JCNDE for ballot.
- Candidate notified of decision.

Questions?

Thank You!