The Integrated National Board Dental Examination (INBDE)

Dr. David M Waldschmidt
Secretary, JCNDE and Director, Department of Testing Services

ADEA Annual Session
Council of Students, Residents, and Fellows (COSRF)
March 19, 2017
Overview

• The JCNDE and the ADA
• The JCNDE and the CIE
• The Integrated National Board Dental Examination (INBDE)
  – Genesis for development
  – Content domain
  – Item development
  – Field testing
  – Implementation plan
  – Retesting policy
• Q & A
Commissions at the ADA

• Commissions established within ADA *Bylaws*
  – Joint Commission on National Dental Examinations (JCNDE)
  – Commission on Dental Accreditation (CODA)
  – Commission for Continuing Education Provider Recognition (CCEPR)
Relationship between ADA and Commissions defined by:

- ADA Constitution and Bylaws
- Standing Rules of Councils and Commissions
- Bylaws and Rules (policies and procedures) as promulgated by the Commissions
- For CODA only:
  - USDE Criteria for Recognition and ADA-CODA MOU
- For Joint Commission only:
- Philosophic underpinnings: accreditation/licensure/recognition:
  - Quality assurance is necessary to protect the public and assure long-term viability of the profession
  - Consistent and free from bias/conflict of interest (as objective as possible)
    - no single community of interest can have undue influence in the decision-making process, including the ADA
  - Integrity, confidentiality, due process
Commonalities among the Commissions

• Agencies of the ADA defined in the ADA Bylaws
• Budget and *Rules* approval
• ADA nominations and appointments
• Qualifications of members
  – expertise-based
  – dentists must be ADA members
• Independence of stakeholder appointments
• Public member (except CCEPR)
• **Independent authority to carry out the program**
Commonalities among the Commissions

• Many stakeholders outside the ADA
• Elect their own chairs
• Select their own consultants (TCC members, psychometricians, etc.)
• ADA division of Education employs the staff
• Four year terms (except students)
• Adopt their own Rules (w/ HOD approval)
  – Joint Commission-HOD may propose and adopt Rules
Mission Statement of the JCNDE

“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.”
### Appointing Organizations and Current JCNDE Appointees

<table>
<thead>
<tr>
<th>Organization</th>
<th>Appointees</th>
</tr>
</thead>
</table>
| AADB (6)     | Dale R. Chamberlain, DDS  
               Luis J. Fujimoto, DMD  
               Patricia Ann Parker, DMD  
               David W. Perkins, DMD  
               William F. Robinson, DDS  
               Leonard P. Weiss, DDS |
| ADA (3)      | Cheryl Haley, DDS  
               Lisa Heinrich-Null, DDS, **JCNDE Vice-Chair**  
               Rhett L. Murray, DDS |
| ADEA (3)     | Cataldo W. Leone, DMD, DMS, FICD  
               Frank W. Licari, DDS, MPH, MBA, **JCNDE Chair**  
               Nader A. Nadershahi, DDS, MBA, EdD |
| ADHA (1)     | Melissa Gail Efurd, RDH, Ed.D |
| ASDA (1)     | Jordan J. Telin, BS |
| Public (1)   | Issie L. Shelton-Jenkins, JD, LLM |
| Liaisons & Observers | Chad P. Gehani, DDS (ADA Board Liaison)  
                         Aaron Henderson, BS (ASDA Observer)  
                         *Liaisons and observers are non-voting appointees* |
The JCNDE oversees the following examinations:

- National Board Dental Examination Part I (NBDE Part I)
- National Board Dental Examination Part II (NBDE Part II)
- National Board Dental Hygiene Examination (NBDHE)
- Integrated National Board Dental Examination (INBDE)
  - Designed to replace NBDE Parts I and II
  - Currently under development
# Department of Testing Services (DTS)

## DTS implements admission and licensure testing programs for:

<table>
<thead>
<tr>
<th>Joint Commission on National Dental Examinations (JCNDE)</th>
<th>Council on Dental Education and Licensure (CDEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• NBDE Part I</td>
<td>• Dental Admission Test (DAT)</td>
</tr>
<tr>
<td>• NBDE Part II</td>
<td>• Advanced Dental Admission Test (ADAT)</td>
</tr>
<tr>
<td>• NBDHE</td>
<td></td>
</tr>
<tr>
<td>• INBDE</td>
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</tbody>
</table>

**Outside clients**

| • Optometry Admission Test (OAT)                         |
| • Other miscellaneous clients                           |

Develops future testing programs as requested
What is 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 examination 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.
How did the INBDE come about?

• A convergence of factors led to the INBDE, which was designed to better serve communities of interest by:
  – Improving test content to make it more appropriate and relevant to the practice of dentistry and contemporary dental education
  – Improving processes and candidates’ experiences in taking the examination
  – Better assisting regulatory agencies

• Examination content trends and the movement toward integrated content and clinical relevance also were considered.
Committee for an Integrated Examination (ad hoc)

The members of the ad hoc CIE are well acquainted with the Joint Commission’s mission and workings.

<table>
<thead>
<tr>
<th>Mark Christensen, DDS (Chair)</th>
<th>Andrew Spielman, DMD, MS, Ph.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair – Dental Hygiene (2006 &amp; 2007)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Bruce D. Horn, DDS</th>
<th>Ron J. Seeley, DDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair – Dental Hygiene (2008)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>B. Ellen Byrne, DDS, Ph.D.</th>
<th>Stephen T. Radack, III, DMD</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ADEA 2009-2012)</td>
<td>(ADA 2008-2011)</td>
</tr>
<tr>
<td>Chair – Administration (2011)</td>
<td>Vice-Chair – JCNDE (2010)</td>
</tr>
</tbody>
</table>
## Committee for an Integrated Examination

### 2016-2017 Appointments

The Joint Commission Chair and NBDE Standing Committee Chairs serve as ex-officio members of the CIE.

<table>
<thead>
<tr>
<th>Frank W. Licari, DDS, MPH, MBA</th>
<th>Lisa Heinrich-Null, DDS</th>
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</thead>
</table>

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<tr>
<th>Nader Nadershahi, DDS, MBA, EdD</th>
<th>William F. Robinson, DDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair – Examination Development (2017)</td>
<td>Chair – Administration (2017)</td>
</tr>
</tbody>
</table>

The Joint Commission Chair has also made additional, one-year appointments.

<table>
<thead>
<tr>
<th>Dale R. Chamberlain, DDS</th>
<th>Steven D. Vincent, DDS, MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCNDE Commissioner</td>
<td>JCNDE Test Construction Committee member</td>
</tr>
<tr>
<td>Twelve Steps for Test Development* (Downing, 2006)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>1. Planning</strong></td>
<td><strong>7. Test Administration</strong></td>
</tr>
<tr>
<td><strong>2. Content Definition</strong></td>
<td><strong>8. Test Scoring</strong></td>
</tr>
<tr>
<td><strong>3. Test Specifications</strong></td>
<td><strong>9. Standard Setting</strong></td>
</tr>
<tr>
<td><strong>4. Item Development</strong></td>
<td><strong>10. Reporting Test Results</strong></td>
</tr>
<tr>
<td><strong>5. Test Design and Assembly</strong></td>
<td><strong>11. Item Banking</strong></td>
</tr>
<tr>
<td><strong>6. Test Production</strong></td>
<td><strong>12. Technical Reports and Validation</strong></td>
</tr>
</tbody>
</table>

*Bold text indicates area of current focus.*
## Timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>JCNDE created ad hoc Committee on Strategic Planning, conducted environmental scans, and considered the future.</td>
</tr>
<tr>
<td>2009</td>
<td>JCNDE resolved to create an integrated examination, and appointed members to the ad hoc Committee for an Integrated Examination (CIE).</td>
</tr>
<tr>
<td>2010</td>
<td>CIE worked to lay the content foundation for the exam.</td>
</tr>
<tr>
<td>2011</td>
<td>Practice analysis and science panels conducted using content foundation.</td>
</tr>
<tr>
<td>2012</td>
<td>General test specifications developed.</td>
</tr>
<tr>
<td>2013</td>
<td>Details about item development and approach were solidified. Resolutions were created to enhance communication and alignment between the Joint Commission and the CIE.</td>
</tr>
<tr>
<td>2014</td>
<td>Approach was refined, and first INBDE Test Construction Committees were formed. Item writing began.</td>
</tr>
<tr>
<td>2016</td>
<td>Short Form Field Test (Sept). Item writing. Retest policy. Refinement of approaches.</td>
</tr>
</tbody>
</table>
In building the INBDE, the CIE’s attention has been drawn to three central concepts:

- Examination Purpose
- Clinical Relevance
- Integration
Examination Purpose

The INBDE is a written examination, exclusive of clinical demonstrations, for the purpose of assisting state boards in determining qualifications of dentists who seek licensure to practice in any state, district or dependency of the United States, which recognizes the National Board Dental Examinations.
Clinical Relevance

Clinical Relevance refers to factors that impact patient outcomes in clinical/professional contexts. This includes all aspects of patient care and also encompasses considerations involving how dentists approach the practice of dentistry (Practice Relevance), and keep up with the profession and advances that impact the profession (Professional Relevance).
Integration

Integration brings to bear knowledge of biomedical, clinical, and/or behavioral sciences along with cognitive skills to understand and solve problems in clinical/professional contexts.

The **INBDE** requires examinees to bring to bear biomedical and/or behavioral science knowledge and cognitive skills in clinical/professional contexts in a way that informs the licensure decision for safe, independent, entry-level competency in the general practice of dentistry.
Examination Purpose, Clinical Relevance, and Integration

The relationship among these 3 key concepts:

- Clinical relevance and alignment with test purpose are the key considerations in establishing content and the items that will appear on the examination.
- Integration is viewed as a means of implementing and promoting this perspective; as such, integration is secondary to clinical relevance and alignment with test purpose.
- In summary, examination purpose drives all considerations, clinical relevance is the best way to achieve the exam purpose, and integration provides a strong means of achieving clinical relevance.
Validation Approach

• The INBDE is currently primarily supported through content related validity arguments focusing on the general appropriateness of the content domain, and the representativeness of test content relative to that content domain.

• INBDE content is currently designed to mirror the integration between foundation knowledge areas and clinical content areas, with a primary emphasis given to the clinical content areas that are necessary for successful performance as an entry-level dentist.
Content Domain

• ADEA formulated a set of clinical competencies that were regarded as being necessary for successful performance as a new dentist. The Commission on Dental Accreditation (CODA) subsequently contributed two additional competencies to this list. The competencies were scrutinized and revised for practice analysis purposes, yielding a total of 65 revised, consolidated clinical content areas.

• In 2011 the Joint Commission approved this list of 65 content areas; these content areas were regarded as defining the domain of general dentistry.

• Feedback from stakeholders and communities of interest has also been solicited and incorporated into the framework.
The Domain of Dentistry

- The Domain of Dentistry represents the clinical content and Foundation Knowledge areas required for the safe, independent, general practice of dentistry by entry level practitioners.

- 65 clinical content areas grouped into three component sections:*  
  1) Diagnosis and Treatment Planning  
  2) Oral Health Management  
  3) Practice and Profession

- 10 Foundation Knowledge Areas adapted from medicine

* Note: In 2016, the JCNDE refined these clinical content areas, articulating 56 clinical content areas. These 56 areas served as the basis for an updated practice analysis for the NBDE Part II.
Diagnosis and Treatment Planning

<table>
<thead>
<tr>
<th>CC</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC 1</td>
<td>Obtain and interpret patient/medical data, including a thorough intra/oral examination, and use these findings to accurately assess and manage all patients.</td>
</tr>
<tr>
<td>CC 2</td>
<td>Identify patient's chief complaints.</td>
</tr>
<tr>
<td>CC 3</td>
<td>Obtain medical, dental, psychosocial, and behavioral histories.</td>
</tr>
<tr>
<td>CC 4</td>
<td>Perform head and neck and intraoral examinations.</td>
</tr>
<tr>
<td>CC 5</td>
<td>Obtain medical and dental consultations when appropriate.</td>
</tr>
<tr>
<td>CC 6</td>
<td>Use clinical and epidemiological data to diagnose and establish a prognosis for dental abnormalities and pathology.</td>
</tr>
<tr>
<td>CC 7</td>
<td>Recognize the normal range of clinical findings and significant deviations that require monitoring, treatment, or management.</td>
</tr>
<tr>
<td>CC 8</td>
<td>Select, obtain and interpret diagnostic images for the individual patient.</td>
</tr>
<tr>
<td>CC 9</td>
<td>Recognize the manifestations of systemic disease and how the disease and its management may affect the delivery of dental care.</td>
</tr>
<tr>
<td>CC 10</td>
<td>Formulate a comprehensive diagnosis, treatment and/or referral plan for the management of patients.</td>
</tr>
<tr>
<td>CC 11</td>
<td>Discuss etiologies, treatment alternatives, and prognoses with patients and educate them so they can participate in the management of their own care.</td>
</tr>
</tbody>
</table>
Oral Health Management

CC 12 Manage patients in a hospital setting.
CC 13 Manage the unique needs relating to the oral health care of infants.
CC 14 Manage the unique needs relating to the oral health care of children.
CC 15 Manage the unique needs relating to the oral health care of adolescents.
CC 16 Manage the oral health care of adults, including the unique needs of women.
CC 17 Manage the unique needs relating to the oral health care of geriatric patients.
CC 18 Manage the unique needs relating to the oral health care of special needs patients.
CC 19 Select and administer or prescribe pharmacological agents in the treatment of dental patients.
CC 20 Anticipate, prevent, and manage complications arising from the use of therapeutic and pharmacological agents employed in patient care.
CC 21 Prevent, diagnose and manage pain and anxiety in the dental patient.
CC 22 Prevent, diagnose and manage temporomandibular disorders.
CC 23 Diagnose and manage periodontal diseases.
CC 24 Implement strategies for the clinical assessment and management of caries.
CC 25 Maintain function and promote soft and hard tissue health.
CC 26 Manage patients with oral esthetic needs.
CC 27 Diagnose and manage developmental or acquired occlusal abnormalities.
CC 28 Manage the replacement of teeth for the partially or completely edentulous patient.
CC 29 Restore partial or complete edentulism with uncomplicated fixed or removable prosthetic restorations.
CC 30 Manage the restoration of partial or complete edentulism using implant procedures.
CC 31 Diagnose and manage pulpal and periradicular diseases.
CC 32 Perform uncomplicated endodontic procedures.
CC 33 Diagnose and manage oral surgical treatment needs.
CC 34 Perform uncomplicated oral surgical procedures.
CC 35 Manage patients requiring modification of oral tissues to optimize restoration of form, function and esthetics.
CC 36 Prevent, recognize and manage medical and dental emergencies.
CC 37 Perform basic cardiac life support.
CC 38 Recognize and manage acute pain, hemorrhage, trauma, and infection of the orofacial complex.
CC 39 Recognize and manage patient abuse and/or neglect.
CC 40 Recognize and manage substance abuse.
CC 41 Evaluate outcomes of comprehensive dental care.
CC 42 Diagnose and manage oral mucosal and osseous diseases.
Practice and Profession

CC 43  Evaluate emerging trends in health care and integrate new medical knowledge and therapies relevant to oral health care.
CC 44  Evaluate social and economic trends and their impacts on oral health care.
CC 45  Utilize critical thinking and problem-solving skills.
CC 46  Evaluate scientific literature and integrate best research outcomes with patient values and other sources of information to make decisions about dental treatment.
CC 47  Apply advances in modern biology to clinical practice.
CC 48  Apply principles of ethics and jurisprudence to the practice of dentistry.
CC 49  Practice within one’s scope of competence and consult with or refer to professional colleagues when indicated.
CC 50  Apply appropriate interpersonal and communication skills.
CC 51  Apply psychosocial and behavioral principles in patient-centered care.
CC 52  Communicate effectively with individuals from diverse populations.
CC 53  Apply prevention, intervention and educational strategies to maximize oral health.
CC 54  Participate with dental team members and other health care professionals in health promotion and disease management for individuals and communities.
CC 55  Evaluate and apply contemporary clinical, laboratory and information technology resources in patient care, practice management and professional development.
CC 56  Evaluate different models of oral health care management and delivery.
CC 57  Apply principles of risk management, including informed consent and appropriate record-keeping in patient care.
CC 58  Use effective business and financial management skills.
CC 59  Use effective human resource management skills to coordinate and supervise the activity of allied dental health personnel.
CC 60  Apply quality assurance, assessment and improvement concepts.
CC 61  Assess one's personal level of skills and knowledge relative to dental practice.
CC 62  Understand and apply local, state and federal laws and regulations pertaining to dentistry and healthcare, including OSHA and HIPAA.
CC 63  Develop a catastrophe preparedness plan for the dental practice.
CC 64  Utilize universal infection control guidelines for all clinical procedures.
CC 65  Communicate case design with laboratory technicians and evaluate the resultant restoration/prosthesis.
Foundation Knowledge Areas: Key Source/Reference

Committee Members

Co-Chair
Robert J. Alpern, M.D.
Dean
Emory University School of Medicine
Yale University School of Medicine

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Sterling Professor of Biological Sciences
Stanford University

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Department of Chemistry
Harvard College

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Lewis and Clark College

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Harvard Medical School

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Chairman, Division of Education
Cleveland Clinic Foundation

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Department of Neuroscience
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HHMI & Distinguished McKnight University Professor
Morse-Alumni Distinguished Teaching Professor
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Brandeis University

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Department of Microbiology and Immunology
Stanford University School of Medicine

Dee Silverthorn, Ph.D.
Senior Lecturer, Integrative Biology
The University of Texas at Austin

https://www.aamc.org/download/271072/data/scientificfoundationsforfuturephysicians.pdf
The successful entry-level general practitioner is focused on the prevention, diagnosis, and management of oral disease, and the promotion and maintenance of general health. This requires application of knowledge in the following areas:

<table>
<thead>
<tr>
<th>FK1</th>
<th>Molecular, biochemical, cellular, and systems-level development, structure and function</th>
</tr>
</thead>
<tbody>
<tr>
<td>FK2</td>
<td>Physics and chemistry to explain normal biology and pathobiology</td>
</tr>
<tr>
<td>FK3</td>
<td>Physics and chemistry to explain the characteristics and use of technologies and materials</td>
</tr>
<tr>
<td>FK4</td>
<td>Principles of genetic, congenital and developmental diseases and conditions and their clinical features to understand patient risk</td>
</tr>
<tr>
<td>FK5</td>
<td>Cellular and molecular bases of immune and non-immune host defense mechanisms</td>
</tr>
<tr>
<td>FK6</td>
<td>General and disease-specific pathology to assess patient risk</td>
</tr>
<tr>
<td>FK7</td>
<td>Biology of microorganisms in physiology and pathology</td>
</tr>
<tr>
<td>FK8</td>
<td>Pharmacology</td>
</tr>
<tr>
<td>FK9</td>
<td>Sociology, psychology, ethics and other behavioral sciences</td>
</tr>
<tr>
<td>FK10</td>
<td>Quantitative knowledge, critical thinking, and informatics tools</td>
</tr>
</tbody>
</table>
Comparison of scientific areas covered by individual *Foundation Knowledge* (FK1-FK10) and those currently covered on either Part I or Part II of NBDE

Excerpts from a presentation by Dr. Andrew Spielman to the Joint Commission’s Committee on Research and Development delivered on February 22, 2013
• The following slides represent science areas covered by Foundation Knowledge Areas 1 through 10.
• Note, that a science area potentially covered by the Foundation Knowledge does not mean it will end up with a substantial number of questions on the new exam. The size of the circle of a specific scientific field is not proportional to their relative representation on the exam.
• This is a qualitative analysis where all fields are considered equal.
Basic and Foundation Sciences covered in part by Foundation Knowledge 1 (FK1)

<table>
<thead>
<tr>
<th>FK1</th>
<th>Molecular, biochemical, cellular, and systems-level development, structure and function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Anatomy</td>
<td>Head and Neck Anatomy</td>
</tr>
<tr>
<td>General and Systemic Pathology</td>
<td>Genetics</td>
</tr>
<tr>
<td>Oral Histology</td>
<td>Oral Biology</td>
</tr>
</tbody>
</table>

Color Coding

<table>
<thead>
<tr>
<th>Part I</th>
<th>Part II</th>
<th>Parts I &amp; II</th>
<th>NEW</th>
</tr>
</thead>
</table>
Basic and Foundation Sciences covered in part by Foundation Knowledge 2 (FK2)

FK2  | Physics and chemistry to explain normal biology and pathobiology

**Color Coding**

- **Part I**
- **Part II**
- **Parts I & II**
- **NEW**
Basic and Foundation Sciences covered in part by Foundation Knowledge 3 (FK3)

| FK3   | Physics and chemistry to explain the characteristics and use of technologies and materials |

- **Biophysics**
- **Biomaterials**
- **Dental Material Sciences**
- **Basic Radiology**

**Color Coding**

| Part I | Part II | Parts I & II | NEW |

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Basic and Foundation Sciences covered in part by Foundation Knowledge 4 (FK4)

| FK4 | Principles of genetic, congenital and developmental diseases and conditions and their clinical features to understand patient risk |

- Craniofacial Biology
- Developmental Biology
- Embryology
- Genetics
- Hereditary Medicine

Color Coding

| Part I | Part II | Parts I & II | NEW |

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Basic and Foundation Sciences covered in part by Foundation Knowledge 5 (FK5)

| FK5 | Cellular and molecular bases of immune and non-immune host defense mechanisms |

**Color Coding**

<table>
<thead>
<tr>
<th>Part I</th>
<th>Part II</th>
<th>Parts I &amp; II</th>
<th>NEW</th>
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</thead>
</table>

- Immunology
- Immunopathology & Biology
- Microbiology
- Virology
- Mycology
- Parasitology
Basic and Foundation Sciences covered in part by Foundation Knowledge 6 (FK6)

| FK6 | General and disease-specific pathology to assess patient risk |

- Cellular and Molecular Pathology
- General and Systemic Pathology
- Pharmacology
- Immunopathology

Color Coding

| Part I | Part II | Parts I & II | NEW |

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Basic and Foundation Sciences covered in part by Foundation Knowledge 7 (FK7)

| FK7 | Biology of microorganisms in physiology and pathology |

- Epidemiology
- Immuno-pathology
- Microbiology
- Mycology
- Oral Biology
- Parasitology
- Pharmacology
- Preventive Medicine and Dentistry
- Pulp Biology
- Public Health
- Virology

Color Coding

- Part I
- Part II
- Parts I & II
- NEW
Basic and Foundation Sciences covered in part by Foundation Knowledge 8 (FK8)

| FK8 | Pharmacology |

Basic and Applied Pharmacology  
Biomedical Research  
Cancer Biology  
Evidence-based Dentistry  
Public Health Policy

Color Coding

<table>
<thead>
<tr>
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<th>Parts I &amp; II</th>
<th>NEW</th>
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Basic and Foundation Sciences covered in part by Foundation Knowledge 9 (FK9)

FK9 Sociology, psychology, ethics and other behavioral sciences

Color Coding

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<th>NEW</th>
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</thead>
</table>

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Basic and Foundation Sciences covered in part by Foundation Knowledge 10 (FK10)

| FK10 | Quantitative knowledge, critical thinking, and informatics tools |

- **Applied Research**
- **Community Dentistry**
- **Critical evaluation of the scientific literature**
- **Dental, Medical and Health Informatics**
- **Dental Public Health**
- **Descriptive & Analytical Epidemiology**
- **Evidence-based Dentistry**
- **Health Promotion**
- **Library sciences**
- **Preventive Dentistry**
- **Statistics**

**Color Coding**

<table>
<thead>
<tr>
<th>Part I</th>
<th>Part II</th>
<th>Parts I &amp; II</th>
<th>NEW</th>
</tr>
</thead>
</table>

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Validation

• A practice analysis was conducted in 2011 with a sample of new dentists (i.e., dentists who had obtained their license within the previous five years)
  – All 65 clinical content areas were at least “moderately important to patient care.”
  – Frequency and criticality ratings were used to calculate the relative importance of each clinical content area and section.
  – The relative importance of each clinical content area determined how many items should be allocated to each clinical content area.

• Two science review panels were conducted to determine the strength of the relationship between each Foundation Knowledge area and each clinical content area.
  – All 10 Foundation Knowledge areas were determined to be related to one or more clinical content areas
  – The relative strength of the relationship between each Foundation Knowledge Area and each clinical content area determined how many items should be allocated to each Foundation Knowledge area, within each clinical content area.
Percentage of Items (450 items*)

* The number of items on the INBDE has not yet been finalized.
Test Specifications

At its April 2013 meeting, the Joint Commission reviewed the methodology and resulting test specifications. The following four key deliverables were approved:

- Model of the Domain of Dentistry.
- Statements and annotations underpinning the Foundation Knowledge for the General Dentist.
- The percentage of items to be devoted to the ten Foundation Knowledge areas assessed by the INBDE.
- The percentage of items to be devoted to the three clinical component sections appearing within the INBDE.

*The approved materials can be viewed in the INBDE section of the Joint Commission’s website (www.ada.org/jcnde).*
Item Development Approach

• In 2014, the Joint Commission approved model items and operational recommendations in the following areas:
  – The Concepts of Integration, Clinical Relevance, and Examination Purpose
  – Item Presentation Considerations Involving Content
  – Language Conventions
  – Administration Conditions
  – Item Writing Standards
  – Item Content Standards
  – Item Writing/Review Process
  – Item Classification/Tagging Approach
  – Field Testing Approach
• In 2015, the Joint Commission continued to refine INBDE model items and its approach in the above areas, and developed the “Patient Box.”
• In 2016, the JCNDE conducted an INBDE Short Form Field Test, approved the INBDE retest policy, and continued item development efforts.
Guiding Principles in INBDE item development

• Examination purpose drives all development decisions.
• Focus on 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 Item Development

- INBDE Test Construction Committees (TCC) have been formed for each clinical content section.
  - Diagnosis and Treatment Planning
  - Oral Health Management
  - Practice and Profession
- TCCs meet within their 5-person groups and also as a full unit (15 members) during item reviews.
- INBDE TCCs have drafted over 1,000 items to date in support of field testing efforts.
INBDE Item Development

• A draft INBDE item development guide has been written to facilitate item development. This draft guide has been posted online (ada.org/jcnde/inbde)
• TCC members are asked to write clinically relevant, integrated items capable of providing insight as to whether a candidate has the cognitive skills necessary to safely practice entry-level dentistry.
• The INBDE utilizes a new item presentation format known as the Patient Box.
### SAMPLE TESTLET

<table>
<thead>
<tr>
<th>Sample</th>
<th>65 YRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
</tr>
<tr>
<td>Height</td>
<td>5' 09&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>240 LBS</td>
</tr>
<tr>
<td>B/P</td>
<td>170/100</td>
</tr>
<tr>
<td>Chief Complaint</td>
<td>&quot;I lost the filling in my back tooth.&quot;</td>
</tr>
</tbody>
</table>

### Medical History
- last saw his physician 2 years ago
- father died of heart attack at age 52

### Current Medications
- diuretic for hypertension
- statin for hypercholesteremia
- low dose aspirin

### Social History
- married, grown children
- retired construction foreman
- has smoked a pipe daily for 25 years

### SCENARIO

The patient presents for replacement of a filling in tooth 19. He reports that he lost the filling over a year ago, but he delayed seeking care because the tooth has not been sensitive. Upon examination, tooth 19 has a missing occlusal restoration and a fractured ML cusp.

Extraoral examination revealed mild actinic damage of his lower lip vermilion border.
The Patient Box

<table>
<thead>
<tr>
<th>Patient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female, 28 years old.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“I haven’t been able to open my mouth for two days.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Background and/or Patient History</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Three days prior, left mandibular third molar extraction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Findings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum opening is 10 mm</td>
</tr>
<tr>
<td>INBDE Patient Box: Patient Section</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Patient</strong></td>
<td></td>
</tr>
<tr>
<td>Female, 28 years old.</td>
<td></td>
</tr>
<tr>
<td><strong>Chief Complaint</strong></td>
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</tr>
<tr>
<td>“I haven’t been able to open my mouth for two days.”</td>
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</tr>
<tr>
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<td></td>
</tr>
<tr>
<td><strong>Current Findings</strong></td>
<td></td>
</tr>
<tr>
<td>Maximum opening is 10 mm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>• This section presents patient demographic characteristics (gender, age, and potentially ethnicity).</td>
</tr>
</tbody>
</table>
| **Presentation Format** | • Male or Female, x years old.  
• Ethnicity may be included if relevant. |
| **Example**    | • Female, 28 years old.                                                  |
Patient
Female, 28 years old.

Chief Complaint
“I haven’t been able to open my mouth for two days.”

Background and/or Patient History
Three days prior, left mandibular third molar extraction.

Current Findings
Maximum opening is 10 mm

<table>
<thead>
<tr>
<th>Section</th>
<th>Chief Complaint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>• This section presents the chief complaint as described by the patient or a guardian.</td>
</tr>
<tr>
<td>Presentation Format</td>
<td>• If quoted directly from the patient, enclose the statement in quotation marks and voice the statement in the first person.</td>
</tr>
<tr>
<td>Example</td>
<td>• “I’ve been unable to open my mouth for two days.”</td>
</tr>
</tbody>
</table>
**Patient**

Female, 28 years old.

**Chief Complaint**

“I haven’t been able to open my mouth for two days.”

**Background and/or Patient History**

Three days prior, left mandibular third molar extraction.

**Current Findings**

Maximum opening is 10 mm

---

**INBDE Patient Box: Background/Patient History**

<table>
<thead>
<tr>
<th>Section</th>
<th>Background/Patient History</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>• This section presents background information such as history of dental diagnosis and treatment, medical conditions, allergies, social history, etc.</td>
</tr>
<tr>
<td><strong>Presentation Format</strong></td>
<td>• The information is assumed to be factual and provided by the treating dentist.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>• Three days prior, left mandibular third molar extraction.</td>
</tr>
</tbody>
</table>
Patient

Female, 28 years old.

Chief Complaint

“I haven’t been able to open my mouth for two days.”

Background and/or Patient History

Three days prior, left mandibular third molar extraction.

Current Findings

Maximum opening is 10 mm

<table>
<thead>
<tr>
<th>Section</th>
<th>Current Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>• This section presents information collected by dental professionals during the current visit.</td>
</tr>
<tr>
<td>Presentation Format</td>
<td>• Can include information such as height and weight, vital signs, results of diagnostic tests, and a general assessment of the patient condition.</td>
</tr>
</tbody>
</table>
| Example           | • Facial edema  
                   • Lymphadenopathy  
                   • Extensive apical radiolucency associated with tooth 6  
                   • Temp. 100.3°  
                   • Blood glucose 240 mg/dL  
                   • BP 150/93 |
Which graph best shows the patient’s likely plaque pH response after drinking a sugary beverage?

**Patient**
- Female, 75 years old

**Chief Complaint**
- “My mouth has been dry for over a month.”

**Background and/or Patient History**
- Oropharyngeal cancer treated by radiation.

**Current Findings**

A graph showing the patient's likely plaque pH response after drinking a sugary beverage is needed.
<table>
<thead>
<tr>
<th>Patient</th>
<th>Female, 75 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Complaint</td>
<td>“My mouth has been dry for over a month.”</td>
</tr>
<tr>
<td>Background and/or Patient History</td>
<td>Oropharyngeal cancer treated by radiation.</td>
</tr>
</tbody>
</table>

Which graph best shows the patient’s likely plaque pH response after drinking a sugary beverage?

![Graph A](image1)
![Graph B](image2)
![Graph C](image3)
![Graph D](image4)

**Answer: A**
Where would a loss of taste be expected?

A. 1 and 2
B. 2 and 3
C. 3 and 4
D. 2, 3, and 4

- **Patient**
  - Male, 38 years old

- **Chief Complaint**
  - “I haven’t been able to taste on the left side of my tongue for the past three days.”

- **Background and/or Patient History**
  - Left inferior alveolar nerve block during a prior dental treatment.
Patient

Male, 38 years old

Chief Complaint

“I haven’t been able to taste on the left side of my tongue for the past three days.”

Background and/or Patient History

Left inferior alveolar nerve block during a prior dental treatment.

Current Findings

Where would a loss of taste be expected?

A. 1 and 2
B. 2 and 3
C. 3 and 4
D. 2, 3, and 4
### INBDE Model Items

**Model Item 38**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Male, 48 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Complaint</td>
<td>“I’ve been in pain for two days and now my face is swollen.”</td>
</tr>
</tbody>
</table>
| Background and/or Patient History | Hypertension  
Type 2 diabetes  
Penicillin allergy |
| Current Findings | Facial edema  
Lymphadenopathy  
Extensive apical radiolucency associated with tooth 6  
Temp: 100.3 F  
BP: 150/93  
Blood glucose 240 mg/dL |

The most appropriate antimicrobial agent is

A. amoxicillin and clavulanate (Augmentin®).
B. cephalexin (Keflex®).
C. clindamycin (Cleocin®).
D. metronidazole (Flagyl®).
INBDE Model Items

**Patient**

- Male, 48 years old

**Chief Complaint**

“I’ve been in pain for two days and now my face is swollen.”

**Background and/or Patient History**

- Hypertension
- Type 2 diabetes
- Penicillin allergy

**Current Findings**

- Facial edema
- Lymphadenopathy
- Extensive apical radiolucency associated with tooth 6
- Temp: 100.3°F
- BP: 150/93
- Blood glucose 240 mg/dL

The most appropriate antimicrobial agent is

A. amoxicillin and clavulanate (Augmentin®).
B. cephalexin (Keflex®).
C. clindamycin (Cleocin®).
D. metronidazole (Flagyl®).
INBDE Field Testing Plan

INBDE Item Writing

- Automatic Item Generation
- Selected model items

Sample Item Survey
Administer 2015-2016

- Qualitative Analysis Results: 2016

Short Form
Administer 2016

- 120 items
- Psychometric Analysis Results: 2017

Mid Length Form
Administer 2017

- Approx. 300 items
- Psychometric Analysis Results: 2018

NBDE Part II Practice Analysis

- Approx. 500 items (as finalized)
- INBDE Scored Exam

NBDE Part II Practice Analysis

INBDE Sample Item Survey

Purpose

• To understand how dental students apply knowledge of the biomedical, clinical, and behavioral sciences in responding to INBDE items.
• To collect feedback from dental students regarding the presentation of examination content.
• To help the Joint Commission determine whether any changes were required to INBDE item development.

Survey and Sample

• The survey was voluntary in nature, and administered to NBDE Part II candidates.
• There were three separate survey forms, each containing five items, with one item shared across all three forms. Each candidate received one form.
• Items were selected to be broadly representative of the Foundation Knowledge and Clinical Content areas. Some were created via Automatic Item Generation.
• The survey was conducted online from July 1, 2015 through September 22, 2015.
• 170 NBDE Part II candidates participated.
• A follow-up study was also conducted to collect additional data.
INBDE Sample Item Survey

• Findings
  • Candidates indicated that INBDE items required them to apply their biomedical science knowledge and clinical experiences.
  • INBDE items were regarded as straightforward, fair, and clinically relevant.
  • the Patient Box provided a clean and simple presentation; some participants commented that they preferred this question format to what is currently used on the Board Exams.
  • No significant changes appeared necessary with respect to INBDE item development efforts
INBDE Short Form Field Test

Purpose

• This field test permitted evaluation of item development, test administration, and scoring functions for the INBDE.
• The number of items on the INBDE was expected to be finalized based upon the results of this field test.

Test Content

• This field test included two short INBDE forms, each containing 120 items (80 unique items plus 40 shared items that appeared on both forms).
• The forms met the INBDE test specification requirements established in 2011.
• The forms contained standalone items and item sets, administered in two sections.
• The INBDE Short Form Field Test (SFFT) took place from October 10 through January 31, 2017.
• Participants received a performance report containing the number of items they answered correctly after they completed the field Test.
Sample

- A total of 4,167 NBDE Part II candidates enrolled in accredited dental schools were invited to participate in the Field Test. 840 candidates participated.

- Each participant received a full refund of their Part II fee ($425), and a chance to win an iPad based on the number of items they answered correctly.

- Participants were removed from the final analytic sample if they showed low effort. The final sample comprised 704 participants from 59 dental schools.

- The candidates in the final sample were representative of the NBDE population with respect to performance on the NBDE Parts I and II.
Major Findings

- Overall, the majority of items performed reasonably well.
- Eighty-nine percent (89%) of participants indicated they were satisfied with their experience on the Field Test.
- Eighty-nine percent (89%) of participants indicated that the questions on the test were clinically relevant (less than 3% disagreed).
- Candidates who had taken the NBDE Part II prior to participating in the SFFT tended to have a more positive impression of INBDE content than those who had not.
- Eighty-five percent (85%) of participants indicated that their educational training prepared them well to answer these types of questions.
- Overall, the comparisons suggest that the INBDE may be viewed by candidates as an improvement over the NBDE Part II in many ways.
Convergent Validity

• Convergent validity evidence is obtained when scores on an examination are positively correlated with scores from other measures of similar constructs.

• **Observed and corrected correlations between SFFT and NBDE scores**

<table>
<thead>
<tr>
<th>Form</th>
<th>Participants</th>
<th>Items</th>
<th>Correlation with NBDE Part I†</th>
<th>Correlation with NBDE Part II†</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>365</td>
<td>88</td>
<td>.62</td>
<td>.74</td>
</tr>
<tr>
<td>B</td>
<td>339</td>
<td>91</td>
<td>.48</td>
<td>.75</td>
</tr>
</tbody>
</table>

†Corrected for attenuation due to unreliability in SFFT scores and NBDE scores. Correlations with NBDE Part II scores were based on 647 participants who had taken the NBDE Part II by January 29, 2017 (336 for Form A and 311 for Form B).

• The positive relationships between SFFT and NBDE scores provide sound convergent validity evidence in support of the intended use and interpretation of INBDE results.
INBDE Short Form Field Test

Additional Insights

• Many candidates did not provide their best effort throughout the entire examination

• In order to achieve score reliability coefficients greater than .90, and in order to maintain a sustainable examination development model over time, the production version of the INBDE would need to contain approximately 500 operational items.

• The Joint Commission’s original plan to conduct a Standard Form Field Test would require further consideration, due to challenges encountered during the short form field test (participation and motivation)

• Data were informative with regard to estimating the amount of time required to answer INBDE items
INBDE field testing efforts have been successful to date and indicate the Joint Commission is on track relative to its stated INBDE Implementation Plan.
2017 INBDE Field Test Administration Details

• The 2017 INBDE Field Test is scheduled to begin in November 2017.
• Eligible NBDE Part II candidates enrolled in accredited dental schools will be encouraged to participate, with a target participation of approximately 1,400 candidates.
• Administration will likely require one full day, with approximately 300 questions administered (60% standalone, 40% item sets)
• At the end of the test, participants will receive a report indicating the number of items they answered correctly.
• INBDE scores obtained from this field test will be kept confidential and will not be reported to dental schools and state boards.
• At the completion of the study, dental programs would be provided with a summary report indicating the overall performance of students in the program (e.g., number of participants, average test scores in areas assessed).
• Depending upon study findings, additional field testing might be necessary to ensure production forms of the INBDE are of the highest quality.
Please Support INBDE Field Testing

- Please participate in the INBDE Field Test scheduled to begin in November 2017, and be prepared to be away for a full day.

- Participation offers many benefits for students:
  - Helps future dental students, the profession, and the public by informing development of the next generation of licensure dental assessments.
  - Helps students prepare to take the NBDE Part II by simulating the experience and exposing students to the types of questions that could appear on the NBDE Part II.

- With respect to additional incentives, the specifics are subject to change but at present the JCNDE is considering the following:
  - Discount on candidates’ NBDE Part II examination fee, up to and including the entire 2017 fee, based on the candidate’s performance on the INBDE field test.
Please Support INBDE Field Testing

• Participation also offers benefits for programs:
  – Summary report indicating overall performance of students
  – Relevant survey data
    • “My educational training has prepared me well to answer these types of questions.”
  – Helps reduce uncertainty for programs concerning the transition to the INBDE, by helping to ensure INBDE development can adhere to the timeframes indicated in the INBDE Implementation Plan.

• Individuals from CODA accredited programs who are eligible to take the NBDE Part II will be eligible to participate in this field test.
INBDE Implementation Plan and Recommended Actions
INBDE Implementation Plan

• The Integrated National Board Dental Examination (INBDE) is an examination that is currently in development by the Joint Commission on National Dental Examinations (JCNDE).
• The INBDE is intended to replace National Board Dental Examination (NBDE) Parts I and II. The INBDE is intended for use by state dental boards to help inform decision-making concerning the licensure of entry-level dentists.
• To address concerns from stakeholders and communities of interest regarding the timing of INBDE implementation, the JCNDE indicated it would provide four years’ notice before the INBDE is implemented and the NBDE discontinued.
• The INBDE Implementation Plan was designed to help address concerns regarding timing and provide this advance notification.
• In 2016 the plan was presented at NDEAF and ADEA conferences, and sent to state boards (Executive Director, President, and Legal), dental programs, ADEA, and ASDA.
• The Implementation Plan provides stakeholders and communities of interest with information concerning how INBDE implementation will occur, the information that will be made available to help facilitate the transition, and recommended actions for stakeholders and communities of interest.
• The slide that follows shows key events associated with INBDE implementation, and the sequence of activity associated with the transition.
Integrated National Board Dental Examination (INBDE) Implementation Plan: “Best Case Scenario”

Note: This implementation plan communicates the best case scenario. Dates presented should be interpreted as “no sooner than.” Actual dates will be contingent upon field testing results. INBDE Practice Test Questions are anticipated for release in 2019.
INBDE Implementation Plan

• On August 1, 2018, the Joint Commission intends to provide stakeholders and communities of interest with notice of INBDE implementation and NBDE discontinuation. This notice will include the following:
  – The projected date when the INBDE will be first available for administration, the official name of the new examination, and how results will be reported.*
  – The dates when NBDE Part I and NBDE Part II will be discontinued.
  – Any additional rules needed to facilitate the transition.

• Two years after notification has been provided, NBDE Part I will be discontinued (approx. July 31, 2020). No Part I administrations will occur after this date.

• The first official administration of the INBDE is expected to take place on August 1, 2020.

• Two years after NBDE Part I is discontinued, NBDE Part II will be discontinued (approx. July 31, 2022). No Part II administrations will occur after this date.

• Notification of INBDE implementation and NBDE discontinuation is contingent upon successful completion of the INBDE Field Testing Program (not depicted in the preceding diagram).

* Similar to Part I and Part II, INBDE results will be reported as “Pass/Fail.”
INBDE Implementation Plan

• In considering the dates provided, please note the following:
  – The plan as presented communicates the “best case scenario.”
  – The dates provided may be delayed if difficulties are encountered. However, the dates will not be “moved up” (e.g., NBDE Part I will be discontinued no sooner than August 1, 2020).
  – The Joint Commission reserves the right to make changes to the plan at any time and as needed, in keeping with the Joint Commission’s mission and purpose.
  – Any significant changes to this plan will be published as soon as information becomes available.
Additional Information from the JCNDE

• Information concerning the INBDE is available via the Joint Commission’s website (www.ada.org/JCNDE/INBDE).

• The following information is currently available and is updated as changes occur:
  – INBDE background
  – INBDE FAQ’s
  – Domain of Dentistry and general validity evidence
  – Preliminary test specifications
  – Preliminary sample questions
  – INBDE retest policy and candidate eligibility (Aug. 2016)
  – INBDE draft item development guide (Sept. 2016)

• The following information will be posted as soon as it becomes available:
  – INBDE practice test questions (anticipated one year in advance of initial INBDE administration)
  – Technical report(s) providing detailed information concerning validity.
INBDE Information from other Sources (not the JCNDE)

• INBDE eligibility rules for students of U.S. dental schools accredited by the Commission on Dental Accreditation (CODA).
  – While the JCNDE sets general eligibility requirements (e.g., through retesting policies), dental schools also provide their own eligibility requirements (e.g., eligibility approval through the dental dean)

• Additional school requirements concerning the INBDE (e.g., linking successful completion of the INBDE to graduation requirements).
  – These rules are determined by each dental school.

• Written examination requirements for each state.
  – These requirements are determined by each state dental board.
INBDE Implementation Plan Considerations

• The requirements of key stakeholders and communities of interest were carefully considered in developing the implementation plan.
  – State Dental Boards
  – Dental Schools
  – US Dental Licensure Candidates

• The following slides indicate specific considerations and recommended actions for these groups.

• The considerations indicated should NOT be regarded as comprehensive of all of the INBDE-related interests of these groups.
## State Dental Boards

<table>
<thead>
<tr>
<th>Implementation Plan Requirement</th>
<th>How Requirement is Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provide sufficient time for state dental boards to assess and understand INBDE validity evidence.</td>
<td>• Post and update validity information on JCNDE website as it becomes available.</td>
</tr>
<tr>
<td>• Provide sufficient time for state dental boards to incorporate the INBDE into licensure decision-making and communicate its acceptability to future licensure candidates.</td>
<td>• Communicate validity information on annual basis at National Dental Examiners’ Advisory Forum (NDEAF).</td>
</tr>
<tr>
<td>• Provide sufficient time for state dental boards to prepare to receive INBDE results on day one of availability.</td>
<td>• Release details of implementation plan in 2016, and provide the following notifications:</td>
</tr>
<tr>
<td>• Consider whether any modifications to practice acts, rules, policies, or procedures will be required.</td>
<td>• INBDE first administration possible as soon as 2020.</td>
</tr>
<tr>
<td>• Provide sufficient time for state dental boards to accept both exam sequences:</td>
<td>• NBDE Part I final administration possible in 2020.</td>
</tr>
<tr>
<td>1) INBDE and</td>
<td>• NBDE Part II final administration possible in 2022.</td>
</tr>
<tr>
<td>2) NBDE Parts I and II.</td>
<td>• Provide notice in 2016 of JCNDE plans for indicating the official name of the INBDE and how results will be reported. Current discussions indicate the JCNDE is likely to associate the name “NBDE” with the INBDE, to ease the transition with regard to state rules and practice acts.</td>
</tr>
</tbody>
</table>
Recommended Actions for State Dental Boards

• Understand the INBDE and keep apprised of new developments.
  • Review information concerning the INBDE on the Joint Commission’s website (www.ada.org/JCNDE/INBDE), and attend the National Dental Examiners' Advisory Forum (NDEAF) annually.
  • Review INBDE validity evidence and the results of field testing as these studies occur.
  • Monitor the website to understand and prepare for any changes as they occur.
• Prepare to use the INBDE in licensure decision-making.
  • Consider whether any modifications to practice acts, rules, policies, or procedures will be required.
  • Prepare to receive INBDE results on day one of availability.
  • Prepare to accept candidates who have successfully completed the National Boards. This could occur under either of the following sequences: 1) INBDE or 2) NBDE Parts I and II.
  • Communicate information concerning the acceptability of the INBDE to future licensure candidates.
## Dental Schools

<table>
<thead>
<tr>
<th>Implementation Plan Requirement</th>
<th>How Requirement is Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provide sufficient time for U.S. dental schools to adjust curricula and prepare students for the INBDE (also consistent with current CODA requirements).</td>
<td>• Release details of implementation plan in 2016, and provide the following notifications:</td>
</tr>
<tr>
<td>• Provide sufficient time for U.S. dental schools to adjust academic policy for incoming students regarding eligibility to sit for National Board Examinations.</td>
<td>• INBDE first administration possible as soon as 2020.</td>
</tr>
<tr>
<td>• Provide sufficient time for U.S. dental schools to adjust academic policy for incoming students regarding school utilization of NBDE Part I and II results (e.g., as prerequisites for students to continue their studies or as a graduation requirement).</td>
<td>• NBDE Part I final administration possible in 2020.</td>
</tr>
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<td></td>
<td>• NBDE Part II final administration possible in 2022.</td>
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<td></td>
<td>• Post INBDE preliminary sample questions publicly in 2016.</td>
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<td></td>
<td>• Provide INBDE practice test questions one year before INBDE initial administration.</td>
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<td></td>
<td>• Provide updates on the INBDE annually at the ADEA conference and subsequently post the presentations online.</td>
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</tbody>
</table>

Note: For US candidates, dental schools now approve the eligibility of Part I and Part II examinees and will determine when their students will transition to the new exam, within the feasible available options. For international candidates, eligibility for Parts I and II involves providing proof of dental school graduation (through ECE). This practice is expected to continue for the INBDE.
Recommended Actions for Dental Schools

• Understand the INBDE and keep apprised of new developments.
  • Review information concerning the INBDE on the Joint Commission’s website (www.ada.org/JCNDE/INBDE), and attend ADEA sessions on the INBDE.
  • Review INBDE validity evidence and field testing results as these studies occur.
  • Monitor the website to understand and prepare for any changes as they occur.
• Prepare your school and students for the INBDE.
  • Review and revise curricula to prepare students for the INBDE and the updated CODA standards.
  • Review academic policy for incoming students and revise as needed concerning:
    • student eligibility to sit for National Board Dental Examinations.
    • school utilization of NBDE Part I and II results.
## U.S. Dental Licensure Candidates

<table>
<thead>
<tr>
<th>Implementation Plan Requirement</th>
<th>How Requirement is Addressed</th>
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<tbody>
<tr>
<td>• Provide U.S. dental licensure candidates with a reasonable opportunity to demonstrate competence with respect to the knowledge and skills required for licensure and measured by a written examination.</td>
<td>• Begin INBDE administrations before NBDE Part II is discontinued.</td>
</tr>
<tr>
<td>• Provide reasonable time and sufficient notice so candidates can plan ahead and take action to avoid being “caught between examination programs” (e.g., preparing for Parts I and II but then finding themselves forced to shift to the INBDE).</td>
<td>• Release details of implementation plan in 2016, and provide the following notifications:</td>
</tr>
<tr>
<td></td>
<td>• INBDE first administration possible as soon as 2020.</td>
</tr>
<tr>
<td></td>
<td>• NBDE Part I final administration possible in 2020.</td>
</tr>
<tr>
<td></td>
<td>• NBDE Part II final administration possible in 2022.</td>
</tr>
<tr>
<td>• Provide sufficient time for candidates to understand retesting policies concerning the INBDE and Parts I and II during the transition period, so candidates can plan and make decisions accordingly.</td>
<td>• Provide practice test questions one year before initial INBDE administration, and post INBDE preliminary sample questions publicly in 2016.</td>
</tr>
<tr>
<td>• Provide test specifications and practice materials so candidates can prepare for the INBDE and know what types of questions to expect.</td>
<td>• Provide INBDE retest policy in 2016, coordinating the INBDE retest policy with the NBDE retest policy.</td>
</tr>
</tbody>
</table>
Recommended Actions for U.S. Dental Licensure Candidates

• Understand the INBDE and keep apprised of new developments.
  • Review information concerning the INBDE on the Joint Commission’s website (www.ada.org/JCNDE/INBDE).
  • Review INBDE test specifications and practice questions.
  • Monitor the website to understand and prepare for any changes as they occur.

• Prepare for the National Board Examinations.
  • Determine which examination track to pursue (NBDE Parts I and II or the INBDE) in consultation with the most recent INBDE implementation plan and:
    • key implementation dates (discontinuation of NBDE Parts I and II, first official INBDE administration)
    • your dental school, its requirements, and your progress in meeting those requirements.
    • the dental boards of states where you intend to apply for licensure.
    • Joint Commission policies (e.g., retesting policies under both examination tracks).
  • Study the areas indicated in the test specifications of your intended examination track.
Retest Policy During Transition Period

• In considering the INBDE transition period, the JCNDE examined many factors, including the following:
  – the Five Years/Five Attempts rule
  – the timing of the initial scored INBDE administrations
  – the schedule of final administrations of NBDE Part I and Part II.
• The Joint Commission has expressed the desire to move candidates to the new examination as quickly as possible,
• The Joint Commission recognized the need to provide simple and direct policies that candidates and educators can easily understand and communicate.
Retest Policy During Transition Period

• The JCNDE has adopted the following policies with respect to the INBDE transition period:
  – Candidates who have not successfully completed the NBDE Part I or Part II may choose to take the INBDE.
  – Once a candidate has tested on the INBDE, the candidate may no longer test on the NBDE Part I or Part II.
  – Candidates who have failed to successfully complete the NBDE Part I or Part II prior to the discontinuation of these examinations must successfully test on the INBDE to obtain National Board certification.
  – INBDE attempts are independent of NBDE attempts with respect to the Five Years/Five Attempts Eligibility Rule. This rule will continue to apply to all NBDE Part I and Part II testing attempts, and candidates will also have five years/five attempts on the INBDE.
  – In providing INBDE results, all attempts on the National Board Dental Examinations (i.e., NBDE Part I, NBDE Part II, and the INBDE) will be reported.
INBDE retest policies and examples are posted online (www.ada.org/JCNDE/INBDE).

### INBDE Retesting Policy: Applied Examples

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Candidate Eligibility</th>
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<tbody>
<tr>
<td>Candidate passes NBDE Part I and NBDE Part II.</td>
<td>Candidate is not eligible to complete the INBDE.</td>
</tr>
<tr>
<td>Candidate passes NBDE Part I and has not attempted NBDE Part II.</td>
<td>Candidate is eligible for up to five attempts on NBDE Part II <em>until</em> any attempts are made on the INBDE. Any such NBDE Part II attempts must occur prior to the NBDE Part II discontinuation date.</td>
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<tr>
<td></td>
<td>Candidate is eligible for five attempts on the INBDE.</td>
</tr>
<tr>
<td>Candidate passes NBDE Part I and fails NBDE Part II once.</td>
<td>Candidate is eligible for four additional attempts on NBDE Part II <em>until</em> any attempts are made on the INBDE. Any such NBDE Part I attempts must occur prior to the NBDE Part I discontinuation date.</td>
</tr>
</tbody>
</table>
News and Resources

- JCNDE Unofficial Actions
- Meeting Presentations
- Newsletters
- Reference Texts
- Technical Reports
- Test Construction
- Case Submission Guidelines
Additional Information and Resources

Joint Commission on National Dental Examinations
http://www.ada.org/en/jcnde

Integrated National Board Dental Examination
http://www.ada.org/en/jcnde/inbde/

National Boards (Examination Guides, FAQ’s, DENTPIN® Information, Score Report Requests)
  Part I and Part II:
    http://www.ada.org/en/jcnde/examinations/nbde-general-information
  Dental Hygiene:

Test Construction Committee Information
  http://www.ada.org/en/jcnde/examinations/test-construction/

Technical Reports, ADEA Presentations, Item Development Guides
  http://www.ada.org/en/jcnde/news-resources/technical-reports
  http://www.ada.org/en/jcnde/news-resources/presentations
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Questions?
Thank You