Advanced Dental Admission Test (ADAT)

Kathleen J. Hinshaw L.D.H., Ed.D.

Prosthodontic Program Directors
American College of Prosthodontists
Spring Educator Meeting

Chicago, Illinois
April 16, 2016
Overview

- Purpose
- Impetus for Development of the ADAT
- ADA Oversight
- Test Content, Design, and Construction
- Test Administration Schedule
- Scoring and Reporting
- Administration, Eligibility, and Retest Policy
- Resources and Communication
- ADAT and NBDE: A Key Comparison
Purpose

The Advanced Dental Admission Test (ADAT) is a computer based examination designed to provide advanced dental education programs with insight into applicants’ potential for success in their program.

- The ADAT is a professionally developed, valid, and reliable examination containing questions written by dental subject matter experts.

- The ADAT will enable programs to quantitatively compare applicants using a nationally standardized and objective test.

- The ADAT can be used in conjunction with other assessment tools to help inform program admissions decisions.
Why Develop an Advanced Dental Admission Test?

- The Joint Commission on National Dental Examinations no longer reports candidate scores for those who pass NBDE Part I and NBDE Part II (January 2012).

- A number of dental schools have moved away from GPA and are reporting grades as pass/fail.

- Advanced dental education programs are seeking other ways to compare program applicants.

- Both program directors and students have expressed concern about how qualifications will be assessed in the admissions process.
Why Develop an Advanced Dental Admission Test?

• Fagin, Howell, Da Silva, and Park (2014) conducted a survey of US dental students.

• Students were “members of either the last class to take the NBDE Part I for a numerical score, or the first class to take the NBDE Part I without a numerical score.”

• 1,843 students responded (18.5% of the target population)
Why Develop an Advanced Dental Admission Test?

“Eighty percent of our respondents wanted some form of a scored exam regardless of their school’s grading practices, whether that is a scored NBDE Part I, an additional entrance exam common to all specialties, or additional specialty-specific entrance exams.”

“The students clearly perceived that entering their application into an extremely competitive and growing applicant pool without a standardized measure could potentially hurt their chances of getting an interview.”

Fagin, Howell, Da Silva, and Park (2014, p.820)
Why Develop an Advanced Dental Admission Test?

- Fagin, Howell, and Park (2015) conducted a survey of directors of postgraduate programs participating in ADEA PASS.

- 326 of 598 surveyed directors responded (54.5% response rate).

- 71% of directors indicated it was more difficult to select interview candidates.

- 76% indicated a desire for a standardized, numerically scored examination to assist in the admissions process.
Why Develop an Advanced Dental Admission Test?

The study authors further noted that applicants from dental schools that do not report GPA or class rank are particularly at a disadvantage.

“These applicants are now missing all three of the most important aspects of their pre-interview application (class rank, GPA, and NBDE Part I score). According to the results of our study, the most important part of these students’ applications has now become letters of recommendation.”

The ADA’s Response

- ADA’s Council on Dental Education and Licensure (CDEL) endorsed creation of a business plan to develop the ADAT (May 2014).

- CDEL distributed a survey to 739 directors of advanced dental education programs to assess demand for the ADAT (October 2014).
Survey Results

• Survey response rate: 63% (464 out of 739 programs)

• 294 program directors (63% of respondents) indicated they were likely or extremely likely to require program applicants to take the ADAT.

• 150 program directors (32% of respondents) voiced interest in participating in the ADAT pilot administration in 2016, and would require all applicants take the exam.
Decision to Pursue ADAT Development

• CDEL reviewed survey results and the ADAT business plan, and recommended that the ADA pursue development of the ADAT (November 2014).

• ADA Board of Trustees approved development of the examination and provided funding (December 2014).
Oversight

- ADA’s Council on Dental Education and Licensure (CDEL) will oversee ADAT policies.

- CDEL’s Committee on Dental Admission Testing (CDAT) will monitor the program and make recommendations to CDEL concerning policies.

- The ADA’s Department of Testing Services (DTS) will implement the ADAT program under the direction of CDEL and its CDAT.
Candidates

The ADAT is designed for administration to individuals seeking admission to advanced dental education programs:

- 3rd and 4th year dental students
- U.S. dentists interested in post-graduate training or degrees
- International dental students/graduates applying to advanced dental education programs or advanced standing in pre-doctoral programs.
ADAT content is structured as follows:

- Critical Thinking
  - Biomedical Sciences
  - Clinical Sciences

- Data, Research Interpretation, & Evidence Based Dentistry

- Principles of Ethics & Patient Management
## Test Specifications Overview

<table>
<thead>
<tr>
<th>Critical Thinking</th>
<th>Number of Items per Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Sciences</td>
<td>80</td>
</tr>
<tr>
<td>Clinical Sciences</td>
<td>60</td>
</tr>
<tr>
<td>Data, Research Interpretation, and Evidence Based Dentistry</td>
<td>30</td>
</tr>
<tr>
<td>Principles of Ethics and Patient Management</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>200</strong></td>
</tr>
</tbody>
</table>
## Test Specifications

### Biomedical Sciences (80)
- Anatomic Sciences
- Biochemistry-Physiology
- Microbiology-Pathology
- Dental Anatomy-Occlusion

### Clinical Sciences (60)
- Endodontics
- Operative Dentistry
- Oral and Maxillofacial Surgery / Pain Control
- Oral Diagnosis
- Orthodontics / Pediatric Dentistry
- Periodontics
- Pharmacology
- Prosthodontics
- Case-based items

### Data, Research Interpretation, and Evidence Based Dentistry (30)
- Study Design
- Data Analysis
- Result Interpretation
- Inference and Implication

### Principles of Ethics and Patient Management (30)
- Professional Ethics
- Communication & Interpersonal Skills
- Anxiety & Pain Control
- Health Behavior Change
- Disabled & Medically Compromised
- Epidemiology
- Prevention of Oral Diseases
- Infection Control
- Materials & Equipment Safety
- Professional Responsibility/Liability
Test Construction Committees

• Test Construction Committee (TCC) meetings were convened for each section of the ADAT.

• TCCs relied on existing DTS Item Writing Guidelines, and also incorporated a new method of presenting patient information (the Patient Box).

• The call for TCC members will be made on an annual basis by the ADA’s Department of Testing Services.

• Test specification changes will occur over time, and will be made based on recommendations from the TCCs, with final approval by CDEL.
## Item #1

<table>
<thead>
<tr>
<th>Patient.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, 45 years old</td>
</tr>
<tr>
<td><strong>Chief Complaint.</strong></td>
</tr>
<tr>
<td>&quot;My teeth wiggle and feel loose.&quot;</td>
</tr>
<tr>
<td><strong>Background and/or Patient History.</strong></td>
</tr>
<tr>
<td>Recently lost his job and has been drinking heavily for the last three months</td>
</tr>
<tr>
<td>Currently homeless</td>
</tr>
<tr>
<td><strong>Current Findings.</strong></td>
</tr>
<tr>
<td>Loose teeth</td>
</tr>
<tr>
<td>Prolonged gingival bleeding</td>
</tr>
</tbody>
</table>

Based on the patient's history and prolonged gingival bleeding, the function of which organ is compromised?

A: Kidney  
B: Liver  
C: Pancreas  
D: Spleen
Practice Test Sample Items

Item #3
Which stratum layer of the epidermis contains stem cells undergoing mitosis?

A: Basale
B: Corneum
C: Granulosum
D: Lucidum
E: Spinosum

Item #4
What inflammatory cell would predominate in chronic sialadenitis if a biopsy is performed?

A: Eosinophils
B: Lymphocytes
C: Macrophages
D: Neutrophils
Practice Test Sample Items

Item #9

Patient.
Male, 20 years old

Chief Complaint.
"My gums bleed every time I brush my teeth."

Background and/or Patient History.
Uncontrolled type 1 diabetes
Recent hospitalization after automobile accident

Current Findings.
Aggressive periodontitis
Elevated HbA1c
Radiographic evidence of alveolar bone loss

How might the stress of the automobile accident have impacted glucose control?

A: Decreased glucose control due to cortisol release
B: Decreased glucose control due to glucagon release
C: Increased glucose control due to epinephrine release
D: Increased glucose control due to norepinephrine release
Practice Test Sample Items

Item #45

**Patient**
Female, 85 years old

**Chief Complaint.**
"I don't like the way my denture looks."

**Background and/or Patient History.**
Osteoarthritis
Right hip replacement 10 years ago
Moderate hypertension controlled with a calcium channel blocker
Patient reports well-fitting dentures

**Current Findings.**
Lesion as shown in associated image
Patient unaware lesion bleeds when manipulated, denies pain
Lesion is attached to the palatal tissue through a 10mm pedunculated base

What is the first step in management of this patient?

A: Perform an excisional biopsy
B: Perform an incisional biopsy
C: Perform a soft acrylic reliner of the existing denture
D: Request the patient to remove the denture for two weeks and re-evaluate
Administration

Administration will occur during a testing window that is 3 ½ months in duration.

- Testing windows lessen the possibility and implications of test content security breaches, thereby protecting the validity of the examination.

Administration dates:

- May 16, 2016 through August 31, 2016 in the pilot year
- April through July in subsequent years, subject to change based on input from the communities of interest.
Eligibility for ADAT Administration

ADAT eligibility criteria closely resemble criteria for the National Board Dental Examinations. Eligibility is based on the candidate’s current status.

<table>
<thead>
<tr>
<th>Training</th>
<th>Status</th>
<th>Action Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>CODA Accredited Dental School</td>
<td>Student</td>
<td>School is responsible for approving the candidate’s eligibility.</td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>Candidate must send proof of graduation to DTS. Eligibility approved after receipt of reasonable proof.</td>
</tr>
<tr>
<td>Non-Accredited Dental School</td>
<td>Student</td>
<td>Candidate requests an Educational Credential Evaluators (ECE) electronic report to certify status as a current dental student.</td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>Candidate request an ECE electronic report to confirm dental degree.</td>
</tr>
</tbody>
</table>
Candidates may test two times per calendar year, and are limited to two testing attempts separated by a minimum of 45 days.

After two testing attempts, candidates must provide DTS with proof that they are actively applying to advanced dental education programs.
Administration

ADAT website (www.ada.org/adat)

- A list of participating advanced dental education programs
- ADAT Guide
- User’s Manual

2016 ADAT fees

- Examination fee: $250; pilot year rate, recently reduced from $350

- Additional ADAT score reports*: $35
  *Covers score report requests made after the time of application. Score report requested at the time of application are processed at no additional charge.

- Non-accredited candidate processing fee: $125
## Testing Schedule

<table>
<thead>
<tr>
<th>Content</th>
<th>Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tutorial</strong></td>
<td>15</td>
</tr>
<tr>
<td>Biomedical Sciences</td>
<td>90</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td>10</td>
</tr>
<tr>
<td>Data, Research Interpretation, and Evidence Based Dentistry</td>
<td>30</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td>10</td>
</tr>
<tr>
<td>Clinical Sciences</td>
<td>70</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td>10</td>
</tr>
<tr>
<td>Principles of Ethics and Patient Management</td>
<td>30</td>
</tr>
<tr>
<td><em>Post-exam Survey</em></td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4 hours 30 minutes</td>
</tr>
</tbody>
</table>

© 2016 American Dental Association, All Rights Reserved
Scoring

- ADAT scores will be reported as scale scores ranging from 200 to 800, with a target mean of 500 and a target standard deviation of 100. Scores will be reported in increments of 10.

- Scores will be reported for six scales:
  1. ADAT Score: an overall score computed based on performance on all ADAT items
  2. Critical Thinking
  3. Principles of Ethics and Patient Management
  4. Biomedical Sciences
  5. Clinical Sciences
  6. Data, Research Interpretation, and Evidence Based Dentistry.

- The number of correct responses will not be reported. Examinees will not receive immediate feedback concerning their test results.

- Scores will be reported to the programs selected by the candidate at the time of application.
ADAT scores will be made available through ADEA PASS, and ADA online score reporting portal (DTS Hub) per the following timetable.

### PRELIMINARY SCORE RESULTS

<table>
<thead>
<tr>
<th>Test Administration Period</th>
<th>Results posted in ADAT Candidate’s “My Account”</th>
<th>Results available to Advanced Dental Education Program Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1, 2016 to July 31, 2016</td>
<td>August 12, 2016</td>
<td>August 12, 2016</td>
</tr>
<tr>
<td>August 1, 2016 to August 31, 2016</td>
<td>September 9, 2016</td>
<td>September 9, 2016</td>
</tr>
</tbody>
</table>

### OFFICIAL SCORE RESULTS

<table>
<thead>
<tr>
<th>Test Administration Period</th>
<th>Results posted in ADAT Candidate “My Account”</th>
<th>Results Available for Advanced Dental Education Program Directors and Dental School Deans</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 16, 2016 to August 31, 2016</td>
<td>September 15, 2016</td>
<td>September 15, 2016</td>
</tr>
</tbody>
</table>

Preliminary score results will be reported as percentiles (not scale scores). **PERCENTILES WILL CHANGE WITH EACH TEST ADMINISTRATION PERIOD, AS THE TOTAL NORM GROUP INCREASES.** Reported candidate percentiles will thus change at each reporting interval (July, August, and September).

Final scale scores will be reported on September 15, 2016.
ADAT and the NBDEs: A Key Comparison

• The ADAT is designed for admission purposes, to help advanced dental education programs identify the most qualified, strongest candidates for selection into advanced dental education programs. Interpretation of results is Norm referenced; designed to allow programs to meaningfully compare candidate skill levels.

• The NBDE Parts I and II are designed for use by state dental boards, to help boards understand whether a candidate for licensure has the required cognitive skills to safely practice dentistry (minimum competency). Interpretation of results is Criterion referenced; designed to determine whether candidate meets minimum requirements.
Normal Curve

Normal Distribution

Standard Deviation

Percentile

Normal Curve Equivalents

Z Scores

T Scores
ADAT Communications - Website

www.ada.org/adat

• Currently available:
  – FAQs
  – PowerPoint presentations
  – Test Specifications
  – Practice Test
  – Guide
  – User’s Manual
  – List of Participating Programs

• Future
  – Technical Report
  – Normative Reports
  – Examination Information Report
  – Periodic Program Performance Reporting
Contact Information

Department of Testing Services
800-232-1694
adat@ada.org

David M. Waldschmidt, Ph.D.
Director
Department of Testing Services
waldschmidtD@ada.org

Kathleen J. Hinshaw, L.D.H., Ed.D.
Senior Manager, Operations/DTS
hinshawk@ada.org

Nicholas B. Hussong, B.A.
Manager, Test Administration
hussongn@ada.org

OPEN
Manager, Test Development
Chien-Lin Yang, Ph.D.
Manager, Research and Development/Psychometrics
yangc@ada.org

Ellen J. Ryske, M.B.A., P.M.P.
Manager, Client Services/Special Projects
ryskeee@ada.org
Questions?