D0150 Clinical Competency Examination (CCE)

Tufts Dental students must complete three D0150 competencies in their third academic year (Sept-early June). If they complete it after the deadline the maximum score is a 70. Per the MCP Document - The deadline is June 1 for the DMD pre-doctoral students and July 1 for advanced standing (IS) students. For required competencies not completed by that time, an "incomplete" grade will be given. Students will have until Aug 1 to complete the missing requirements at which time the incomplete grade will be replaced with a grade based on the average of their competency grades. Students failing to complete year three requirements by August 1 will receive a failing clinical grade, will have to appear before the SPC and may not be promoted to year 4. Once the students have completed the missing competencies successfully a new grade will be calculated and placed on the transcript next to the original failing grade. The grading is Honors/Pass/Fail.

Most dental school practical exams address up to three specific competencies. The D0150 CCE addresses the following portions of the Tufts University School of Dental Medicine (TUSDM) Competency Statements for the Contemporary Dental Graduate, July 2013:

1. **DIAGNOSIS:** Graduates must be competent to formulate differential, provisional and/or definitive diagnoses by collecting and interpreting findings from medical (to include information from the basic and biological sciences) and psychosocial histories, clinical and radiographic examinations and other diagnostic tests.

2. **TREATMENT PLANNING:** Graduates must be competent to develop comprehensive, evidence-based, properly sequenced treatment plan(s) based on diagnosis and risk assessment. Comprehensive treatment planning may include coordination with other health care professionals. Plan(s) must address patient’s chief concern(s), disease control and reduce the risk of future disease. Graduates must be able to effectively communicate this information with the patient or parent/guardian including the risks and benefits of the treatment plan(s).

3. **TREATMENT:**

   i) **Emergency Management:**
   Graduates must be competent to identify/diagnose, manage (5) and/or prevent oral, dental and medical emergencies.

   ii) **Oral Health Promotion:**
   Graduates must be competent to provide prevention, intervention and education of oral disease for a diverse population of patients of all ages and needs.

   Graduates must be competent to collaborate with dental team members and other health care professionals to promote and attain maintenance of oral and oral-systemic health.

   iii) **Prevention of Pain and Anxiety:**
   Graduates must be competent to diagnose, prevent and manage orofacial discomfort and anxiety in the dental patient.

   iv) **Malocclusion and Space Management:**
   Graduates must be competent to identify functional disorders involving the occlusion.

   Graduates must be competent to diagnose and manage malocclusion in the primary, mixed and permanent dentition and be able to recognize (6) interferences in normal growth and development.

   v) [left blank on purpose]

   vi) **Oral and Maxillofacial Pathology and Radiology:**
   Graduates must be competent to: detect and describe abnormalities of soft and hard tissues; develop a differential diagnosis and; manage the patient’s care.

   vii) **Endodontic Therapy:**
   Graduates must be competent to manage and treat diseases of pulpal and periradicular origin.

   Graduates must be competent to manage and perform (7) simple* non-surgical endodontic treatment.

   viii) **Operative and Prosthetic Therapy:**
   Graduates must be competent to manage and treat conditions of dental hard tissue and missing teeth using appropriate materials and techniques (including management of simple restorative implant procedures)

   ix) **Periodontal Therapy:**
   Graduates must be competent to manage and treat periodontal diseases.

   * “simple” is defined by each specialty area

4. [Left blank on purpose]
5. PRACTICE MANAGEMENT:
Graduates must have knowledge in managing a dental practice in a private/public setting, to include collaborating, communicating and coordinating with other members of the health care team to provide optimal health care for the patient.

6. ETHICS AND PROFESSIONALISM:
Graduates must be competent to understand and manage the ethical, professional and legal issues of oral health care in a humanistic environment.

7. INFORMATION MANAGEMENT AND CRITICAL THINKING:
Graduates must be competent to acquire, integrate and apply information in a critical and scientific manner to assist in evidence-based patient care, using information technology where applicable.

The student must alert the group practice coordinator that they will challenge the D0150 CCE right after the huddle. This competency normally takes 2 appointments to complete. The PC expects to spend little time with the student early in the first appointment. The evaluation during the second appointment takes much more time.

Remind the student that they only have two sessions (6 hours) to complete and present the exam. It is alright to make time allowances for delays as in radiology. Taking over 6 hours to complete a comprehensive dental exam is not competent and is an automatic failure.

Students may not have help from students or faculty. The student may not use part of this competency for another competency except for the Medical Consult Competency. For example, the student may not take the perio exam competency or the alginate competency with this patient.

Explanation of Grading Criteria
Score: 1 = Below Minimum Expectations; 2 = Meets Expectations; 3 = Above Expectations

Grading is be Honors/Pass/Fail, and is completed on axiUm. A student will receive a grade of Honors if they have four 2's in a complex case or two 2's in a moderate case. Simple cases will not be considered for Honors. If a student receives a single 1, an F is given. Expect about 20% of students to earn Honors.

Procedure

Upon entering the operatory for the start swipe, the operatory should be set up and ready for the exam. The student presents a filled out health history. The patient is in the dental chair and they are prepared with safety glasses and the patient napkin. The student must have the XMRT competency paper form and complete the top of the form. Plan the X0001 competency code in axiUm. Complete this code when the exam is complete.

1. Infection Control/Universal Precautions/Operatory

   1: Below Minimum Expectations
   Untidy operatory; inappropriate clinical attire; lack of or missing barrier placement. The student and the patient are not prepared with personal protective gear including patient eye protection and bib, student eye protection, gown, gloves.

   2: Meets Expectations
   The student misses barrier protection on one surface or device, the student has eye protection for themselves and the patient. They must wear eye protection during the procedure.

   3: Above Expectations
   All appropriate barriers in place before pt. is seated. The student wears business casual or matching scrubs that are the correct color. The student wears mask, gown, gloves and eye protection. The patient wears eye protection and a bib. The correct instruments are on the tray, arranged neatly, with appropriate disposables (2x2's, cotton rolls, etc.).

The student presents the health history of the case.

- Chief concern
- Health history
- Dental history
- Read the summary. It should be in the right format, accurate and easy to read. The summary should include the information necessary to inform emergency team in case of an emergency.
- Suggested format:

  Chief concern:

  Medical conditions and medications: (list conditions with the medications prescribed under each condition. The PC may access the PMP and print the form. That way the student will have the complete prescription list and the names of the prescribers.)

  Follow this format:

  Refer to medical consult:

  Condition – Medication – dose/frequency

  Hypertension – Hydrochlorothiazide – 10mg/day
Osteoporosis – Fosamax – 20mg/day (medical clearance required prior to all invasive procedures (i.e. extractions).

Allergies: Percocet, Penicillin & Latex

Alerts (check that the student indicated the medical alerts in the red medical alert tab at the bottom of the axiUm desktop.)

Medical insurance name and account number

TMC# if applicable

Primary Care Physician name and contact information

Emergency contact name, relationship, and contact information

If the patient has a very simple health history such as “No medications, No Medical Conditions, No known drug allergies”, ask the student a simple medical or pharmacology question. Examples:

- A patient reports ringing in his ears. You note that he has a history of osteo-arthritis. An overdose of what common OTC medication may result in this symptom? (Aspirin)
- A patient has systemic lupus erythematosis. What is a common oral effect of this disease? (xerostomia)
- A patient is taking ibuprofen daily for TMJ symptoms. What organ may suffer damage as a side effect of the use of this medication? (Kidney)

Ask the student if they are satisfied with the radiographs in the patient’s record.

Indicate to the student if this is a simple, moderate or difficult case

2. Chief Concern/Dental History

1: Below Minimum Expectations
Unaware of the chief complaint or some patient dental history

2: Meets Expectations
The student demonstrates knowledge of patient’s chief concern and dental history. The student records this information in axiUm and presents it to the examiner when prompted.

3: Above Expectations
The student demonstrates thorough knowledge of their patient’s chief complaint and expectations. They are aware of all dental history and experiences. The student anticipates and applies this information in the context of their patient’s overall treatment and care. The student recorded this information in the record and informs the examiner without prompting.

3. Medical History/ Medications: the form must be complete and the summary includes a list of medical conditions. There is a list of medications with frequency, dosage, purpose, and prescribers. There is a list of medical providers with contact information. Emergency contact name, contact information, and relationship. If the patient has a single medical condition or regularly takes a single medication, the student fills out the medical consultation tab. The student may ask the practice coordinator (PC) if the PC or the medical staff should approve the medical consult tab.

If the student chooses to take this competency with a patient who has a clean medical history (no medications or medical conditions) the examiner should ask the student a question as if the patient has a medical condition or takes a medication.

Students may obtain the full med list with dosages from the patient’s physician or pharmacy. Help the student consult the Massachusetts PMP when appropriate, for example when their patient has a history of chronic pain or psychopharmacy prescriptions.

1: Below Minimum Expectations
History is not completely filled out. The student is unaware of some pertinent medical history; unaware of some medications.

2: Meets Expectations
Health History filled out and summarized. Student has knowledge of how this patient’s history might impact dental treatment (drug-drug interactions or oral health effects of medications).

3: Above Expectations
Health History completely filled out including a cogent summary. The student is able to answer any questions regarding impact of patient’s medications, medical conditions, and allergies on future dental treatment. Did the student explain to their patient why a thorough Med. History is important for optimal/comprehensive care?

Indicate to the student whether this is simple, moderate, or difficult as the Tufts Patient Classification System indicates.

1. Simple – Type 1 patient
2. Moderate – Type II patient
3. Complex – Type III or IV patient

The PC grades the first 3 lines of the Exam competency paper form, initials those lines, indicates simple, moderate or difficult, and swipes their card for the start permission.

The student completed part A of the D0150. The student works independently until they present to the PC during the second appointment.
The next time the PC returns to the operatory, the examination should be complete. This includes perio charting, ROE, radiographic and clinical findings notes, peri and pros consult notes, and other consult notes if applicable such as, endo, ortho, oral pathology and referrals to oral surgery. There should be treatment plans in the treatment planning module. The patient should understand the contents of the treatment plans and the costs involved. The patient should have signed all necessary consents.

1. Radiographs
   a. Quality
   b. Adequacy –
      i. Did the student request additional or replacement films?
      ii. Does the student know the ADA guidelines for ordering radiographs?
      iii. Ask the student to identify radiographic landmarks such as the zygomatic arch, coronoid process, mental foramen.
      iv. Ask the student to ID materials (they should document surfaces with materials), disease (e.g. caries, incipient caries)
      v. Does the student know the buccal object rule?

4. Radiographic Interpretation: This is the best opportunity to test the student’s knowledge of clinical radiographic analysis and diagnosis. Go over each radiograph with the student. Ask questions about normal anatomy, materials, disease, and the buccal object rule. The student should request retakes when necessary. The student should understand the ADA guidelines for prescribing radiographs. (http://www.ada.org/~/media/ADA/Member%20Center /Files/Dental_Radiographic_Examinations_2012.pdf?la:en)

1: Below Minimum Expectations
Misses significant normal and pathological radiographic findings; misses the need for retakes even with prompting. Does not know the buccal object rule.

2: Meets Expectations
Recognizes most normal and pathological radiographic findings; recognizes the need for retakes with prompting. Knows the buccal object rule, but cannot apply it in this case.

3: Above Expectations
The student recognizes all normal and pathological radiographic findings and understands etiology of those findings. The student asks for retakes without prompting. The student understands and applies the buccal object rule.

a. Clinical exam

ROE – soft tissue and oral cancer screening

• The student reports and records all soft tissue lesions and findings including location, color, shape, size, consistency and a differential diagnosis with three or more potential diagnoses. If the student misses an obvious soft tissue lesion, mark as Unsatisfactory.
• Fill out all sections including occlusion and jaw movement.

5. Head and Neck Cancer Screening: The student advises the examiner of their findings before or as the examiner does their own extraoral exam of the patient. The examiner may ask the students questions about findings such as which muscle is here? What is this structure? What is this bump in the buccal mucosa near the upper second molar? What are the three types of lingual papillae? What are some differences between herpetic lesions and aphthae? How is it possible to confirm the diagnosis of an amalgam tattoo by radiography?

1: Below Minimum Expectations
The student is unable to recognize oral anatomical structures, oral abnormal or variant conditions. The student fails to present the results of their exam including the lack of significant findings.

2: Meets Expectations
Able to recognize oral anatomical structures; able to recognize oral abnormal and variant conditions when asked. The ROE form is complete with minor omissions.

3: Above Expectations
The student recognizes all oral anatomical structures and understands their function. The student recognizes all abnormal oral conditions or variations from the norm without prompting.

6. Dental Findings/Charting/Identification of Dental Conditions (e.g. caries, defective restorations):

1: Below Minimum Expectations
It is not acceptable for the student to miss significant normal and pathological hard tissue/restorative findings, diagnoses.

2: Meets Expectations
The student recognizes normal and pathological hard tissue/restorative findings and diagnoses with prompting.

3: Above Expectation
The student recognizes all normal and pathological hard tissue/restorative findings, and correct diagnoses without prompting.
7. Periodontal Findings, Diagnosis and Treatment Plan: The student must complete the periodontal exam form and case note. The student should have a thorough knowledge and understanding of their patient’s periodontal condition. Refer to the Guidelines for Predoctoral Clinical Periodontology Program 2016-17, Student Version. Koo and Steffensen. http://tusk.tufts.edu/view/url/Dental/1692/2009664.

1: Below Minimum Expectations
Misses significant normal and pathological periodontal findings; cannot diagnose or treatment plan. Multiple pocket depth measurements differ more than 1 mm from examiner's readings.

2: Meets Expectations
Recognizes most normal and pathological periodontal findings. The student's periodontal pocket measurements are within 1 mm of the examiner. The case note and periodontal chart are accurate and agree with the student's diagnosis. The student's treatment plan is adequate. The patient is informed.

3: Above Expectations
Recognizes all normal and pathological periodontal findings. The student’s treatment plan is complete. The patient is informed. The student understands the etiology of the patient’s condition and explains it to their patient. The student reviewed home care with the patient.

8. Etiology/CAMBRA/Habits/Diet: The student should know the etiology of their patient’s condition. They will know this by asking medical history and CAMBRA questions. They should probe deeply. It is not adequate for the student to say that the patient has periodontal disease, because they do not floss, or that they have decay, because they drink a lot of soda. Expect complete information on this important section.

1: Below Minimum Expectations
The student misses etiology and/or risk factors of the patient’s medical and dental condition. The student may have filled out the forms, but may not understand the questions or the significance of the answers.

2: Meets Expectations
The student presents most of the etiology and risk factors for the patient’s medical/dental condition. The information is in the record in a complete CAMBRA form, history form and case note. The student includes a preventive dental plan. The patient is informed.

3: Above Expectations
The student presents all of the etiology and risk factors for the patient’s medical/dental condition. The patient understands their condition and consents to the preventive plan thanks to the student’s adept communication. For the purposes of this exam, the preventive plan may include either the CAMBRA High Risk kit or a prescription for Prevident 5000 Booster Plus or a generic.

9. Treatment Planning/Options Presented/Referral to Specialist:

1: Below Minimum Expectations
Multiple treatment plans are not presented. Treatment plans presented are not adequate. Necessary referrals not suggested. The student fails to recognize when a case is beyond the ability of a pre-doctoral student.

2: Meets Expectations
The student offered the patient multiple acceptable treatment options. The patient has an understanding of the different treatment options. Adequate referrals suggested.

3: Above Expectations
The student sequences all treatment plans recorded correctly in axUlm. Patient understands their options. All necessary referrals suggested.

10. Evidence Based Assessment/Rationale - Ask the student for evidence based assessment/rationale.

1. PICO question
2. Search with search terms
3. Papers selected and rationale for that selection
4. Analysis of papers based on level of evidence, bias, confounding, applicability.
5. Application of the evidence to the case.
6. Account for clinical expertise.
Grade: Evidence Based Assessment/Rationale

1: Below Minimum Expectations
No evidence basis or rationale given for treatment, or the student does not fully understand the evidence that they present to the patient and the examiner. The student does not know the patient’s preference. The student does not consider professional experience. The clinical question is poorly constructed, poorly considered, or does not apply to their patient.

2: Meets Expectations
The student presents evidence (at least two scientific papers less than 5 years old), documents the clinical question (PICO), the search for evidence, explains the level of evidence and the way the level of evidence affects the reliability of the conclusion, and the student applies the evidence to their case. Also, the student should have an idea of the patient’s preference and of the way clinical expertise may apply to this case.

3: Above Expectations
The student presents a thorough and eloquent EBD basis for a significant part of the patient’s treatment plan. The EBD presentation includes all of the components listed above in writing. The student understands and explains the patient’s preference and the way clinical expertise applies to this case.

11. Financial Arrangements
Based on the student's proposed treatment plans for this patient, the student must figure out the estimated out of pocket expense for their patient. If the patient has dental insurance, the student may meet with a business office representative (between appointments) to confirm coverage parameters. For example, yearly maximum, need for pre-authorization, coverage types (type I, II, or III), and yearly deductables.

If the patient does not have insurance, ask the student a simple insurance question such as a dental amalgam is what type of insurance coverage? What is the annual maximum? What is the deductible?

The student must review Tufts payment policies with the patient.

1: Below Minimum Expectations
Financial policy is unsigned. The estimated treatment cost was not presented to the patient.

2: Meets Expectations
The financial policy is signed. The student explains to the patient the total estimated cost of treatment, but not the specifics (insurance coverage, cost of individual procedures, etc).

3: Above Expectations
The financial policy is signed. The student explains to the patient the estimated cost of treatment by procedure, total cost, and out of pocket expenses.

The patient understands costs well enough that they engage in relevant conversation about financing, insurance coverage, or they make definitive statements about ability to pay.


1: Below Minimum Expectations
The student's professional demeanor toward their patient, faculty, staff and colleagues was below the minimal ethical and professional standards of the dental profession.

2: Meets Expectations
The student's professional demeanor toward their patient, faculty, staff and colleagues was acceptable.

3: Above Expectations
The student's professional demeanor toward their patient/faculty, staff and colleagues upheld the highest standards of the dental profession.

14. Patient Interaction/Communication Skills/cultural competency:
Below Minimum Expectations
The student fails to understand patient's needs or issues related to culture. The student does not converse with the patient at the patient's level of understanding.

Meets Expectations
The student has a basic level of ability to assess patient's needs and tries to adjust their language to the patient's level of understanding. The student recognizes that cultural context may affect the patient's acceptance of care.

Above Expectations
The student assesses their patient's psychological and emotional needs, and attitude toward past treatment. Applies cultural context to care for patient. The student is able to adjust information delivery to the patient's level of understanding. The student demonstrates a high level of empathy for their patient.

15. Organization/Time Management/Preparedness:

(If the patient is tardy or the student spends a lot of time in radiology, do not count that as part of the 6 hours allotted for this procedure.)

Below Minimum Expectations
The student is unprepared for appointments at the time of the appointment. The student uses more than 6 hours to examine, diagnose, treatment plan, and present the case.

Meets Expectations
The student is prepared for appointments. Finishes on time. Completes this competency within 6 hours.

Above Expectations
The student is well prepared for the appointment. The student uses clinical time efficiently. Seems unhurried, and competent. Finishes within 6 hours.

17. Change the X0001 code to complete, fill out the D0150 CCE form and swipe.

Considerations on the grade:

* See the grading criteria above.
* Unsatisfactory or a "1" in any section is an automatic failure. For example, the student did everything right, except the student only explains one treatment plan to the patient, or the student misses an obvious lesion – hard or soft tissue – that is unsatisfactory.

* A failure on this exam means that the student must perform a new competency for a new grade.