COMPONENT II
CANDIDATE STUDY GUIDE
ORAL AND MAXILLOFACIAL SURGERY

Introduction

The intent of this guide is to provide the candidate with an understanding of the format used for the Component II of the National Dental Specialty Examination (NDSE).

The example questions are intended for candidates in Oral and Maxillofacial Surgery and are meant to demonstrate the various styles of questions that may appear in the exam. The content is meant for illustrative purposes only and should not be construed as an example of the difficulty level of the examination.

For information on examination content please refer to the Examinations – Component II section for your specialty.

Component II Examination Questions

The Component II Examination is a test of clinical decision-making. Specifically, the ability to assess, treat and understand probable outcomes. The cases used in the Component II Examination tend to be “typical” cases that a Resident/Graduate Student would treat during their training program. These questions are case-based. A typical clinical case protocol contains a hypothetical patient situation (a clinical vignette) developed from actual cases. The case starts with a clinical vignette which may include a patient history, radiographs and/or clinical photographs. The candidate is then questioned on how he/she will manage the patient, emphasis is placed on patient care decisions, as if the candidate was caring for the patient.
As part of their preparation, it is also highly recommended that candidates gain as much experience as possible working through case-based oral examination questions. For example, in many specialty programs candidates get the opportunity to present their own clinical cases to mentors and fellow residents; this helps the individual become more familiar and comfortable with the oral exam format.

While preparing for the oral examination it is also helpful to have other residents and/or mentors present the candidate with clinical cases using the NDSE format. It is better still if the candidate is provided cases that they have never seen before or are unfamiliar with.

Here is a general description of a Component II clinical case protocol; this is followed by a number of sample questions. Once again it should be stressed that the content used in these sample questions are used for illustrative purposes only and should not be construed as an example of the level of difficulty or content of the examination questions.

**Clinical Case Protocol**

A typical Component II question would start with a clinical vignette that could include some or all of these elements:

- Age and gender of the patient
- Chief Complaint
- History of the chief complaint
- Health history
- Dental history
- Other information as needed
- Initial radiographs and/or photographs

Once the clinical vignette has been presented, the candidate is then questioned on how he/she will manage this clinical case. Additional clinical information, radiographs and/or photographs will be made available upon request or they may be provided automatically to the candidate. An example of the sequencing of questions follows.
1) Case Assessment, Data Gathering, Etiology and Diagnosis

In this section, some of the decision-making skills that may be assessed include:

*Offer a final diagnosis*
*Systematically identify the existing problems*
*Use appropriate additional diagnostic modalities to aid in the diagnosis*
*Demonstrate a questioning strategy to investigate the chief complaint*
*Identify the etiology of the clinical problem*
*Develop a differential diagnosis if appropriate, and be able to discuss each of these legitimate possibilities based on the information provided*

Possible questions that may be asked include:

*Describe what you see?*
*How would you investigate your patient’s chief complaint?*
*How would you manage the chief complaint?*
*What other information/test/image would you want to obtain for this patient?*
*How would you proceed?*
*What is your differential diagnosis?*
*What is your probable diagnosis?*
*How would you manage the chief complaint?*

2) Treatment Plan, Therapy and Prognosis

In this section, some of the decision-making skills that may be assessed include:

*Develop a treatment plan or management strategy for this clinical case*
*Discuss the advantages and disadvantages of the proposed treatment plan*
*Discuss the prognosis for the proposed treatment*
*Discuss the management of the case if key clinical information was modified such as a different chief complaint or medical history*

Possible questions that may be asked include:

*You now see these radiographs/photographs/clinical tests, how would you proceed?*
*What would be your treatment plan for this patient?*
*What would be the short and long-term prognosis?*
*How would you explain the treatment plan to the patient?*
*Describe the therapy most beneficial to the patient; indicate why you feel this is the best therapy?*
*The patient questions you about prognosis, how would you respond?*
Once you have completed the first phase of treatment, what would you do next?
The patient presents with a different medical history, for example asthma, how would you modify the treatment plan?
If the patient becomes uncooperative with your treatment, what would you do next?

3) Therapeutic Results, Complications and Maintenance

In this section, some of the decision-making skills that may be assessed include:

Management of the case following the completion of initial treatment
Development of a plan to assess the outcomes of treatment
Prevention of future complications and reoccurrence of disease
Identify and treat possible future complications
Discuss the long-term plan for this patient
Discuss alternative treatments when the patient demonstrates poor compliance

Possible questions that may be asked include:

What would be your criteria for successful treatment of this patient?
How would you follow this patient long-term?
Would you see this patient again? when? and how often?
Now that treatment is completed, would you have any concerns?
Is additional treatment indicated in the future?
What are the possible complications for this patient?
What signs and symptoms would you expect?
How would you treat this complication?
If the patient did not respond to treatment, what would be your next step?
What maintenance procedures would you provide for this patient?
Sample Questions

Question #1

You are to proceed with ______________ (procedure) on one of your patients who is a 64 year old male. During your review of his medical history you note that he is taking the following medications:

Drug A: ________________________ Drug B: ______________________
Drug C: ________________________ Drug D: ______________________

1. What medical disease or diseases does your patient suffer from?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

2. Before proceeding with the treatment plan is there anything else you want to know about the patient’s condition?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

If the candidate does not ask, examiner says: “Your patient provides you with the following information regarding signs and symptoms”: (examples: cough, pain, etc.)

_________________________________________________________________________

_________________________________________________________________________
3. Are there any other findings you need? (Probe with this question if the candidate says no other findings needed). Are there any clinical tests, images, laboratory values or consultations you require in helping to characterize his disease further?

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________

Tests, images and laboratory results are as follows: x-ray, blood test, ekg., etc.

____________________________________________________________

4. How would you characterize the severity of your patient’s disease?

____________________________________________________________

____________________________________________________________

5. What complications might this patient experience in the peri-operative period? How would you prepare for them?

____________________________________________________________

____________________________________________________________

6. What about any potential complications during treatment? How would you prepare for them?

____________________________________________________________

____________________________________________________________

7. On the basis of his disease and its severity, what arrangements would you make in order to avoid complications in the peri-operative period.

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________
You have elected to proceed with the procedure (pick one) as:

inpatient  or  outpatient  or  in office (local)  or  in office (sedation)

You have given the following medications:

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Five minutes into the procedure your patient develops the following signs and symptoms (examples): loss of consciousness, shortness of breath, chest pain, hypotension, etc.

8. What would you do now?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

9. If the candidate does not ask for additional information, then ask – "What findings would you be looking for?"

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Findings are as follows: monitor, ekg. etc.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

__________________________________________________________________
10. What is your presumptive diagnosis (nature and severity) of this complication?

Question #2

A thirty-three year old healthy female presents to your clinic with a chief compliant of not liking the appearance of her smile.
Clinical images presented

1. What is the patient’s problem? If the candidate asks for additional images provide these:

   Additional clinical images
   Radiographic images

2. What is your presumptive diagnosis?

3. What do you tell her regarding what you can do to address her chief compliant? Would you offer more than one treatment option, if so what and why?

4. You elect to address the problem with the patient’s smile, by performing a.................. surgical procedure. On the image provided please trace out the incisions you would make for this type of procedure and explain any potential complications?
5. Upon reflection of a full thickness flap you observe the following features of the underlying bone (clinical image provided). Describe what you see and whether you would modify your treatment plan?

6. During the surgical procedure you experience difficulties with ................. ? How would you address this complication?

7. Three days post-surgery your patient phones your office complaining of ................. What do you tell this patient? What would you do about this problem?

8. You see your patient at one week for your first scheduled post-operative checkup. What instructions do you provide to this lady? What do you tell her about the time to achieve surgical healing, before she can be referred to her dentist for restorative treatment?
Question #3

This case is oriented around assessing the candidates management of attrition, abrasion and erosion.

Visual material: Photographs of 4 different maxillary models for 4 different patients.

Patient History: Four different patients present to your office. All of the patients are complaining about the loss of tooth structure.
Attrition/Abrasion/Erosion Case

Chief Complaint: Four different patients present to your office. All of the patients are complaining about the loss of tooth structure.

Review the photographs of the diagnostic models included. The patient’s models are identified from case #1 to 4.

1. What do you feel is the primary cause of the loss of tooth structure in each of the cases presented?

Answer: Mechanical Wear Pattern – models identified as #1 and 3
Chemical Wear Pattern – models identified as #2 and 4

(Qualifier – If the candidate incorrectly identifies one of the cases then deduct 1 point. If the candidate incorrectly identifies 2 cases then deduct 2 points)

2. How did you differentiate between the primary cause of the loss of tooth structure on the identified cases?

Answers: 1. ____________________________________
2. ____________________________________
3. ____________________________________
4. ____________________________________

3. All of the 4 patient’s want to increase the length of their anterior teeth. Assuming the medical history is no contributory, What additional clinical information would you review prior to advising a patient?

Answers: 1. ____________________________________
2. ____________________________________
3. ____________________________________
4. ____________________________________
Question #4

Review the photograph identified as patient #1. The patient’s chief complaint is that the front teeth are too short. How would you address this complaint and what guidelines would you use to increase the length of her front teeth?

(Answer must include surgical crown lengthening to be given credit)

Answers: 1. Surgical periodontal crown lengthening using the following as guides:
   • 
   • 
   • 
   • 
   • 
   •
Question #5  Oral and Maxillofacial Surgery  Medicine Case

A 55 year-old male previously diagnosed with OSA, undergoes maxillo-mandibular advancement. The surgical information is as follows:

Blood loss = 300cc  
Fluid in = 3 litres normal saline  
Urine output = 500cc

You are called urgently to floor on the first post-operative day. The patient is clearly short of breath.

1. How will you proceed?

Show vitals
- BP – 100/50
- PULSE – rapid and thready
- SpO2 – 85% on room air

Show ECG

2. Identify the rate and rhythm

3. Are you going to treat this rhythm?

Show CXR

4. What are the significant findings on this film?

5. What is your diagnosis?

Show Arterial blood gases
- pH – 7.30
- PaCO2 – 60 mmHg
- PaO2 – 70 mmHg

6. What is your diagnosis based on the arterial blood gas results?

7. What will your initial management of this patient entail?

8. You are about to give the patient Lasix and he becomes unresponsive. How would you proceed?

9. The patient is not breathing and has no detectable pulse. Describe your initial management of this situation.
10. Describe how you will perform CPR?

Show new ECG

11. Based on this ECG, what is your diagnosis?

12. How will you treat this PEA?