Examination Preparation

Some of the tasks performed by an orthodontist and the related decision-making skills that may be assessed in the new Scenario-based Clinical Examination include:

Data Gathering and Diagnosis
Tasks:
1. Perform a screening examination using established guidelines to determine if and when treatment is indicated.
2. Gather pertinent records using established guidelines to diagnose the nature of orthodontic and dentofacial problems and determine their etiologies.
3. Develop a comprehensive diagnosis based on the patient's chief concerns, medical and dental history, dentofacial condition, growth and neuromuscular status, and psychosocial concerns to serve as the basis for treatment planning.
Skills:
• Interviewing patients and guardians
• Interpreting medical and dental histories
• Determining the need for radiographs
• Taking essential radiographs
• Interpreting radiographs
• Identifying pathology and deviations from normal
• Determining if and when treatment is indicated
• Performing intra- and extra-oral examinations
• Taking intra- and extra-oral photographs
• Deciding which data are needed for a thorough diagnosis
• Evaluating data gathered from the intra- and extra-oral examinations and all other records to differentiate normal occlusion from malocclusion
• Obtaining and analyzing serial records
• Selecting and using indicated diagnostic technology
• Extracting 2-D images from cone-beam computerized tomography
• Tracing radiographs for cephalometric analysis
• Taking impressions for study casts

Treatment Objectives and Planning
Tasks:
1. Develop evidence-based facial, skeletal, and dental treatment objectives based on the patient and guardian's chief concerns and diagnosis to optimize dentofacial health, neuromuscular function, esthetics, and post-treatment stability.
2. Develop evidence-based treatment plan(s) by selecting the most appropriate options in consultation with and in the best interests of the patient to address the identified concerns and achieve specific objectives.
3. Obtain informed consent in accordance with established documentation procedures in order to enhance the patient and guardian's understanding of treatment options, recommendations, benefits, limitations, and risks.
Skills:
• Determining deviation from normal and its extent
• Establishing treatment objectives based on knowledge of dentofacial growth and development
• Determining achievable outcomes based on the most relevant evidence
• Evaluating research literature and other information critically
• Developing and documenting treatment plans based on sound principles of appliance design and biomechanics and on patient concerns
• Creating a visualized treatment objective, dental diagnostic setup, and surgical treatment objectives when applicable
• Assessing the necessity and efficacy of dentofacial orthopedics and orthognathic surgery
• Identifying treatment options
• Differentiating the efficacy and efficiency of appliance options
• Selecting the most appropriate treatment plan
• Planning all phases of orthodontic treatment, including initiation, completion and retention
• Planning appropriate biomechanical techniques
• Working effectively in an interdisciplinary treatment environment
• Educating patients and guardians effectively on treatment options and recommendations
• Documenting treatment plans
• Communicating with and educating patients and guardians

Treatment Implementation and Management

Tasks:

1. Manage dentofacial problems in accordance with the treatment plan using orthodontic appliances and technology to achieve treatment objectives efficiently.

2. Evaluate the progress of treatment and its relationship to the objectives and timeline based on appropriate records to maximize treatment efficiency and outcomes.

3. Collaborate in providing interdisciplinary treatment using effective communication and documentation procedures to enhance treatment outcomes.

Skills:

- Using appliances effectively and efficiently in the treatment of all types of malocclusions
- Identifying and interpreting the cause of problems
- Taking impressions and scans for appliances
- Fabricating appliances
- Placing fixed and/or removable appliances
- Activating fixed and/or removable appliances
- Maintaining fixed and/or removable appliances
- Removing fixed appliances
- Performing enameloplasty
- Comparing pre-treatment and progress conditions
- Analyzing treatment progress with appropriate imaging, accepted periodontal diagnostic protocols, and neuromuscular examination
- Assessing treatment progress with dental casts, imaging, and cephalometric analysis
- Interpreting treatment progress occlusion and treatment efficacy
- Comparing patient progress with treatment objectives
- Tracing and superimposing calibrated radiographs for cephalometric analysis
- Taking intra- and extra-oral photographs
- Taking essential radiographs
- Documenting neuromuscular function
- Extracting 2-D images from cone-beam computerized tomography
- Taking impressions for study casts
- Intra-oral scanning
- Recording inter-occlusal registration
- Documenting dental, periodontal, skeletal, and facial status
- Recording and resolving deviations from expected treatment
- Communicating with and educating patients and guardians
- Communicating, consulting and coordinating treatment with professional colleagues

Critical Analysis and Outcomes Assessment
Tasks:
1. Assess post-treatment facial esthetics using appropriate guidelines to evaluate form, symmetry, and soft tissue harmony.
2. Assess dental, periodontal, and neuromuscular health using appropriate guidelines to identify post-treatment complications.
3. Evaluate post-treatment occlusion using accepted standards to enhance stability and dental health and assess the overall efficacy of treatment.
4. Evaluate treatment outcomes comparing pre-treatment and post-treatment records to assess dental and skeletal changes.
Skills:
• Analyzing and interpreting post-treatment dental, periodontal, and neuromuscular outcomes with dental casts, appropriate imaging, accepted normal values, periodontal diagnostic protocols, and neuromuscular examination.
• Comparing pre- and post-treatment conditions
• Tracing and superimposing calibrated radiographs for cephalometric analysis
• Taking intra- and extra-oral photographs
• Taking essential radiographs
• Documenting dental, periodontal, and neuromuscular status
• Interpreting post-treatment occlusion and treatment efficacy
• Extracting 2-D images from cone-beam computerized tomography
• Taking impressions for study casts
• Intra-oral scanning
• Recording inter-occlusal registration
• Performing post-treatment cast and radiograph evaluations
• Comparing the treatment outcomes to the treatment objectives
• Analyzing serial treatment records for understanding and planning treatment and retention procedures
• Communicating outcomes with patients and guardians
• Documenting dental, periodontal, and skeletal status