Oral Health Solutions Utilizing Clear Aligner Therapy

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Course Details:

Understanding the health benefits of proper occlusion and how orthodontic care plays a role is a message best delivered by the dental professional.

This course reviews how to identify, discuss and provide patients with orthodontic solutions for malocclusion utilizing Clear Aligner Therapy. Attendees will learn talking points and examples of conversation starters to assist in effectively communicating the importance of preventing subsequent consequences malocclusion may impose; occlusal trauma, wear, abfractions, incipient decay and periodontal disease. This is crucial for patient engagement in the belief that clear aligner therapy is a viable treatment option for sustained oral health, not just aesthetics.

Course Objectives:

• Understand the connection between malocclusion and overall health

• Identify the consequences of malocclusion as it relates to the periodontium and oral health

• Recognize the benefits of a Perio-Ortho-Restorative clinical protocol

• Translate evidence-based research into effective patient/practitioner communication

• Identify candidates who would benefit from orthodontics/clear aligner therapy

CODA Standards Met:

2-8 The curriculum must include content in the following four areas: general education, biomedical sciences, dental sciences and dental hygiene science. This content must be integrated and of sufficient depth, scope, sequence of instruction, quality and emphasis to ensure achievement of the curriculum's defined competencies. A curriculum document must be submitted for each course included in the dental hygiene program for all four content areas.
2-13 Graduates must be competent in providing the dental hygiene process of care which includes:

- comprehensive collection of patient data to identify the physical and oral health status;
- analysis of assessment findings and use of critical thinking in order to address the patient’s dental hygiene treatment needs;
- establishment of a dental hygiene care plan that reflects the realistic goals and treatment strategies to facilitate optimal oral health;
- provision of patient-centered treatment and evidence-based care in a manner minimizing risk and optimizing oral health;
- measurement of the extent to which goals identified in the dental hygiene care plan are achieved;
- complete and accurate recording of all documentation relevant to patient care

2-14 Graduates must be competent in providing dental hygiene care for all types of classifications of periodontal disease including patients who exhibit moderate to severe periodontal disease.

2-19 Graduates must be competent in the application of the principles of ethical reasoning, ethical decision making and professional responsibility as they pertain to the academic environment, research, patient care and practice management.

2-23 Graduates must be competent in problem solving strategies related to comprehensive patient care and management of patients.

**Canadian Competencies Met:**

- C7. Apply evidence-based decision making approaches to the analysis of information and current practices.
- C9. Apply the behavioral, biological and oral health sciences to dental hygiene practice decisions.
- F3. Use professional judgment and methods consistent with medico-legal-ethical principles to complete client profiles.
• F8. Prioritize clients' needs through a collaborative process with clients and, when needed, substitute decision makers and/or other professionals.

• F10. Revise dental hygiene care plans in partnership with the client and, when needed, in collaboration with substitute decision makers and/or other professionals.

• F14. Provide recommendations in regard to clients’ ongoing care including referrals when indicated.
Classroom Support Materials

Discussion questions:

1. Discuss some of problems/issues that can arise from malocclusion?

2. Discuss the need to treat malocclusion prior to placement non-curious/non pain related restorations?

3. The age group using clear aligners the most is 45-75 year olds. Discuss the rationale.

4. Compare and contrast the concepts of teeth sliding versus colliding.

5. Discuss sagittal, transverse, and vertical classifications of occlusion.

Classroom activities:

1. Role play discussing with patient the importance of proper tooth alignment given his/her specific assessment data.

2. Given a case study with recession, list and describe all present causes of recession.

3. Using case patients with before clear aligned therapy photos have student classify the arch shape (U, V, square, or omega)

4. Using before and after photos of patients who have completed clear aligner therapy, have students match up each patient's before/after photo
Exam Questions:

1. When assessing the need for clear aligner therapy, the ______ cross section is used to visually inspect the maxillary and mandibular arches.

   **Answer:** TRANSVERSE (this cross section cuts the maxillary and mandibular arches in two allowing direct vision of the arch shape.

2. A "perfect" U-shaped arch will have a measurement of ____mm from the lingual of the first maxillary molar on the right to the lingual of the maxillary first molar on the left.

   **Answer:** 36 mm

3. As a quick reference, a _____ can be used to measure the width of a patient's arch.

   **Answer:** COTTON ROLL (a cotton roll is approximately 36 mm long)

4. Anterior crowding must be 4mm or greater to increase the host factor of periodontal disease.

   A. True
   B. False

   **Answer:** FALSE 3mm of crowding is sufficient to affect the gingival health

5. Class I, II, and III are terms used for ________________ occlusal classification.

   A. orthognathic
   B. sagittal
   C. transverse
   D. vertical

   **Answer:** B. sagittal. Orthognathic is NOT a classification. Transverse is the horizontal relationship of occlusion. Vertical is the edge to edge or overbite classification.
6. All of the following are considered causes of crowding EXCEPT one. Which one is the EXCEPTION?

A. improper mesial/distal inclination
B. improper arch form
C. improper arch width
D. improper buccal/lingual inclination

**Answer:** A Improper mesial/distal inclination does not exist.

7. __________ are the most prone teeth to have tooth brush abrasion.

**Answer:** CANINES due to location at the corners of the arches

8. What fraction of class V buccal composites are lost after just 2 years of placement due to retention and malocclusal issues.

A. 1/4  
B. 1/3  
C. 1/2  
D. 3/4

**Answer:** 1/3 lost after just 2 years.

9. Abfraction is defined as a non-caries Class V lesion. Horizontal forces versus vertical forces are ideal in proper occlusion.

A. Both statements are TRUE.  
B. Both statements are FALSE.  
C. First statement is TRUE, second statement is FALSE.  
D. First statement if FALSE, second statement is TRUE.

**Answer:** C Vertical forces are ideal in proper occlusion.