

**Course:** DNTH 305 Dental Hygiene Theory

**Topic:** Dental Hygiene Care for the Infant, Child, and Adolescent

**Audience:** Adult Learners (Student Dental Hygienists)

**Time:** 50 minutes

**Materials:** PowerPoint, projector, computer

**Instructional Objectives:**

Upon completion of the lecture, the student should be able to:

1. Apply the role of the dental hygienist to the dental hygiene care of infants, children, and adolescents.
2. Distinguish between vertical transmission and horizontal transmission.
3. Analyze the oral health needs of infants, children, and adolescents.
4. Develop an individualized oral hygiene routine for each age category.
5. Advocate for the prevention of early childhood caries.

**References:**

- Bol, R., Chen, C. K., Dontsop, M., Farmer-Dixon, C., Gangula, P. R., Nwankwo, K., Potter, C., Sherden, L., & Walker, R. (2024). Investigating the relationship between dental cavities and protective factors among children aged 0-5 years. *Journal of Clinical Pediatric Dentistry*, 48(1), 60–68. <https://doi-org.proxy.lib.odu.edu/10.22514/jocpd.2024.008>
- Boyd, L. D., Halaris J. F., & Mallonee, L. F. (2023). Wilkins' clinical practice of the dental hygienist. Jones & Bartlett Learning. 14th ed.
- Centers for Disease Control and Prevention (CDC). (2022). *Children's oral health: Overview*. Centers for Disease Control and Prevention. <https://www.cdc.gov/oralhealth/basics/childrens-oral-health/index.html>

National Institute of Dental and Craniofacial Research. (2021). Oral health across the lifespan: Adolescents. Oral health in america: Advances and challenges [Internet]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK578291/>

Reese, J. (n.d.). *Oral hygiene in adolescents*. John Hopkins University.  
<https://www.hopkinsmedicine.org/health/wellness-and-prevention/oral-hygiene-in-adolescents>

TIME	LESSON CONTENT	NOTES-MEDIA-Q/A
8 minutes	<p><b>I. ANTICIPATORY SET</b></p> <p>A. <u>Introduction</u></p> <p>The oral health needs of children 0-17 years old differs from that of an adult. Their needs are specific to their development and age group. In this lesson, we will learn about the oral hygiene needs of 5 age groups and discuss patient considerations. Bacterial transmission and periodontal infections will also be discussed in addition to general information about pediatric dental visits and early childhood caries.</p> <p>B. <u>Gain Attention/Motivate</u></p> <p>A video about the foster parent and her foster child's oral care will be shown at the beginning of the presentation. The video details the foster parent's struggle to address the oral health needs of her foster child. You may see patients like this when you begin working. You can make a difference in a patient's life just by providing them with a short education on oral hygiene.</p> <p>C. <u>Activate Prior Knowledge</u></p> <p>Has anyone seen or treated a patient who was under 18 years old? Do you think oral hygiene needs differ based on age?</p> <p>D. <u>Establish Rationale</u></p> <p>By attending today's lecture, you are increasing your knowledge of patient categories and treatments. It is important to understand the</p>	<p><b>Slide 1:</b> Dental Hygiene Care for the Infant, Child, and Adolescent title</p> <p><b>Slide 2:</b> Early Childhood Caries Video</p> <p><b>Q:</b> What do you think about the woman's situation with her foster child?</p> <p><b>A:</b> Answers will vary; the situation was difficult to listen to.</p> <p><b>Note:</b> A patient's oral hygiene needs can vary depending on the age, dentition, and development stage of the patient.</p>

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	<p data-bbox="358 264 987 411">different oral hygiene needs between various age groups, as you will be seeing and treating more than just adult patients.</p> <p data-bbox="383 428 841 464">E. <u>Present Instructional Objectives</u></p> <p data-bbox="383 483 943 518">After today's lecture, you should be able to:</p> <ol data-bbox="407 537 987 1178" style="list-style-type: none"> <li>1. Apply the role of the dental hygienist to the dental hygiene care of infants, children, and adolescents.</li> <li>2. Distinguish between vertical transmission and horizontal transmission.</li> <li>3. Analyze the oral health needs of infants, children, and adolescents.</li> <li>4. Develop an individualized oral hygiene routine for each age category.</li> <li>5. Advocate for the prevention of early childhood caries.</li> </ol>	<p data-bbox="1016 462 1260 497"><b>Slide 3:</b> Objectives</p>

TIME	LESSON CONTENT	NOTES-MEDIA-Q/A
10 minutes	<p><b>II. Pediatric Dentistry</b></p> <p>A. Definition</p> <p>B. Education</p> <p>C. American Academy of Pediatric Dentistry (AAPD)</p> <ol style="list-style-type: none"> <li>1. Definition</li> <li>2. Mission statement</li> </ol> <p>D. Age Categories for Pediatric Patients</p> <ol style="list-style-type: none"> <li>1. Infants</li> <li>2. Toddlers</li> <li>3. Preschoolers</li> <li>4. School age</li> <li>5. Adolescents</li> </ol> <p>E. The Role of The Registered Dental Hygienist (RDH)</p> <ol style="list-style-type: none"> <li>1. Informing and educating caregivers</li> <li>2. Interprofessional collaboration</li> </ol> <p>F. Oral Health Literacy</p> <ol style="list-style-type: none"> <li>1. Definition</li> <li>2. Dentalcare.com</li> </ol> <p>G. Early Childhood Caries</p> <ol style="list-style-type: none"> <li>1. Definition</li> <li>2. Etiology</li> <li>3. Most susceptible teeth</li> <li>4. Bacterial Viral Transmissions <ol style="list-style-type: none"> <li>a) Bacteria involved</li> <li>b) Vertical vs horizontal transmission</li> </ol> </li> <li>5. Caries Risk Levels <ol style="list-style-type: none"> <li>a) Low</li> </ol> </li> </ol>	<p><b>Slide 4:</b> Pediatric dentistry</p> <p><b>Slide 5:</b> American Academy of Pediatric Dentistry (AAPD)</p> <p><b>Slide 6:</b> Age Categories for Pediatric Patients</p> <p><b>Slide 7:</b> The Role of the RDH</p> <p><b>Slide 8:</b> Oral Health Literacy</p> <p><b>Slide 9:</b> Early Childhood Caries</p> <p><b>Q:</b> What is a common way infants or toddlers can get prolonged exposure to fermentable carbohydrates?</p> <p><b>A:</b> Sippy cups and baby bottles.</p> <p><b>Note:</b> Decay caused by prolonged use of a baby bottle or a sippy cup is called bottle decay.</p> <p><b>Slide 10:</b> Bacterial Viral Transmissions</p>

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5 minutes	<ul style="list-style-type: none"> <li>b) Moderate</li> <li>c) High</li> <li>d) Extreme</li> </ul> <p>6. Cavitated Lesions vs White Spot Lesions</p> <p>7. Carious lesion stages</p> <p>8. Early childhood caries development</p> <ul style="list-style-type: none"> <li>a) Normal, healthy teeth</li> <li>b) White spot lesions</li> <li>c) Brown spots</li> </ul> <p>9. Early childhood caries progression</p> <ul style="list-style-type: none"> <li>a) Initial lesions</li> <li>b) Advanced lesions</li> </ul> <p>10. Primary teeth eruption pattern</p> <p>H. Epidemiologic Indices</p> <ul style="list-style-type: none"> <li>1. Decayed, Missing, Filled (DMFT)</li> <li>2. Decayed Missing, Filled Surfaces (DMFS)</li> <li>3. dmft / dmfs</li> </ul> <p><b>III. Dental Visits</b></p> <ul style="list-style-type: none"> <li>A. Dental Care Barriers</li> <li>B. Pediatric Dental Visits</li> <ul style="list-style-type: none"> <li>1. Dental home</li> <li>2. Oral health instructions</li> <li>3. Scheduling</li> <li>4. Treatment</li> </ul> </ul>	<p><b>Slide 11:</b> picture of caries risk levels</p> <p><b>Slide 12:</b> picture of cavitated lesions vs white spot lesions</p> <p><b>Note:</b> Cavitated lesions have reached the dentin whereas white spot lesions are restricted to the enamel.</p> <p><b>Q:</b> What do the white spot lesions signify?</p> <p><b>A:</b> Demineralization</p> <p><b>Slide 13:</b> carious lesion stages picture</p> <p><b>Slide 14:</b> Early childhood caries development picture</p> <p><b>Slide 15:</b> picture of early childhood caries progression</p> <p><b>Slide 16:</b> Epidemiologic indices</p> <p><b>Slide 17:</b> primary teeth eruption chart picture</p> <p><b>Slide 18:</b> Dental visits subtitle</p> <p><b>Slide 19:</b> Dental Care barriers</p> <p><b>Note:</b> Low oral health literacy can be considered a barrier.</p> <p><b>Slide 20-22:</b> Pediatric Dental Visits</p> <p><b>Side 23:</b> Patient Management Considerations by Age subtitle</p> <p><b>Slide 24:</b> Infant Oral Care: 0-1 year</p> <p><b>Slide 25:</b> Education Tips To Caregivers of Infants (ages 0-1 year)</p> <p><b>Slide 26:</b> Toddler to Preschool: ages 1-5 years</p> <p><b>Q:</b> What should we avoid mouthrinse?</p> <p><b>A:</b> The child may not know</p>
20 minutes	<p><b>IV. Patient Management Considerations by Age</b></p> <ul style="list-style-type: none"> <li>A. Infant Oral Care: 0-1 year</li> <ul style="list-style-type: none"> <li>1. 6-10 months</li> </ul> </ul>	

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	<ol style="list-style-type: none"> <li>2. 20-30 months</li> <li>3. Education Tips To Caregivers of Infants (ages 0-1 year)</li> </ol> <p>B. Toddler to Preschool: ages 1-5 years</p> <ol style="list-style-type: none"> <li>1. Oral Health Considerations - Toddler to Preschool (age 1-5 years) <ol style="list-style-type: none"> <li>a) 2-3 year olds</li> <li>b) Toothpaste amount</li> <li>c) Greater than 6 years old</li> </ol> </li> <li>2. Speech and Language Development <ol style="list-style-type: none"> <li>a) Premature tooth loss</li> <li>b) Digit habits</li> <li>c) Malocclusions</li> <li>d) Accident and injury prevention</li> </ol> </li> <li>3. Dietary Factors - Toddlers and Preschoolers</li> </ol> <p>C. School Age: ages 6-12 years</p> <ol style="list-style-type: none"> <li>1. Oral exam</li> <li>2. Independent oral hygiene</li> <li>3. Periodontal assessment</li> <li>4. Primary teeth exfoliation</li> <li>5. Sports related injuries</li> <li>6. Ultrasonic use</li> <li>7. Tips for Effective Clinical Management <ol style="list-style-type: none"> <li>a) Oral examination</li> </ol> </li> </ol> <p>D. Adolescent Stages and Oral Health: ages 12-17</p> <ol style="list-style-type: none"> <li>1. Susceptibility</li> <li>2. Esthetic appearance</li> </ol>	<p>how to spit, and we want to avoid them swallowing it.</p> <p><b>Note:</b> The caregiver should be participating in oral hygiene care with their child.</p> <p><b>Slide 27:</b> Oral Health Considerations - Toddler to Preschool (age 1-5 years)</p> <p><b>Slide 28:</b> Speech and Language Development</p> <p><b>Slide 29:</b> Dietary Factors - Toddlers and Preschoolers</p> <p><b>Q:</b> Why should we use the words “unhealthy” and “healthy” instead of “good” and “bad”?</p> <p><b>A:</b> The child may think good foods are foods that taste good or make them happy instead of foods that do not contribute to cavities.</p> <p><b>Slide 30:</b> School Age: ages 6-12 years</p> <p><b>Q:</b> Why should we place sealants at 6 and 12 years old?</p> <p><b>A:</b> That is when the 1st and 2nd permanent molars erupt.</p> <p><b>Slide 31:</b> Tips for Effective Clinical Management</p> <p><b>Slide 32:</b> knee to knee infant exam image</p> <p><b>Slide 33-34:</b> Adolescent Stages and Oral Health: ages 12-17</p> <p><b>Slide 35:</b> Oral Health Considerations: Adolescents (ages 12-17)</p> <p><b>Q:</b> What is used to assess for sleep apnea? What stages need</p>

TIME	LESSON CONTENT	NOTES-MEDIA-Q/A
	<p>3. Oral Health Considerations: Adolescents (ages 12-17)</p> <ul style="list-style-type: none"> <li>a) Puberty and menses</li> <li>b) OHI and Treatment</li> <li>c) Teaching</li> </ul> <p>4. Dental Hygiene Treatment: Adolescents (12-17)</p> <p>E. Periodontal Infections</p> <ul style="list-style-type: none"> <li>1. Biofilm-induced gingivitis</li> <li>2. Risk factors for periodontitis</li> </ul> <p>F. Reasons for Referral</p> <p>G. Documentation</p> <p>H. ODU SODH Clinical Considerations</p> <ul style="list-style-type: none"> <li>1. Age restrictions</li> <li>2. Parent or caregiver</li> <li>3. Ages 5-12</li> <li>4. Ages 13 and older</li> <li>5. Occlusion</li> <li>6. Additional findings</li> <li>7. Periodontal charting</li> <li>8. Dental charting</li> <li>9. Scaling</li> <li>10. Treatment plan</li> </ul>	<p>a referral?</p> <p><b>A:</b> Mallamptai score; stages 3 and 4.</p> <p><b>Slide 36:</b> Dental Hygiene Treatment: Adolescents (12-17)</p> <p><b>Q:</b> Why might we be concerned about third molars from an oral hygiene point of view?</p> <p><b>A:</b> They are hard to clean.</p> <p><b>Note:</b> Tooth erosion is a common oral finding for patients with eating disorders.</p> <p><b>Slide 37:</b> Periodontal Infections</p> <p><b>Slide 38:</b> Reasons for Referral</p> <p><b>Slide 39:</b> Documentation</p> <p><b>Slide 40:</b> ODU SODH Clinical Considerations</p>
2 minutes	<p><b>SUMMARY</b></p> <p>The purpose of today's lecture was to discuss the oral hygiene care of infants, children, and adolescents. Specifically, we highlighted the oral hygiene needs and considerations of infants,</p>	<p><b>Slide 41:</b> Summary slide</p>



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5 minutes	<p data-bbox="358 264 984 1066">toddlers, preschoolers, school-age children, and adolescents. In addition we discussed early childhood caries, their development, clinical description, and methods of prevention. The role of the dental hygienist in the treatment of children is to educate and inform the caregiver's of their child's needs as well as proper oral hygiene care at home. Oral health literacy, among other things, can present as a barrier to effective oral hygiene instruction when it comes to educating caregivers and patients. A dental hygienist must make decisions based on the oral health needs of their patient as well as be able to communicate effectively with caregivers when a child is the patient.</p> <p data-bbox="358 1140 862 1176"><b>CRITICAL THINKING ACTIVITY</b></p> <p data-bbox="358 1253 946 1394">The students will be shown 3 case studies and must answer the following questions for each case:</p> <ol data-bbox="407 1417 980 1671" style="list-style-type: none"> <li>1. Is this an example of vertical or horizontal transmission?</li> <li>2. What are this patient's oral health needs?</li> <li>3. What should be included in this patient's oral hygiene routine?</li> </ol> <p data-bbox="358 1745 776 1780">The cases studies are as follows:</p>	<p data-bbox="1016 333 1414 621"><b>Q:</b> What can develop in children under the age of 6 years old that is caused by the prolonged exposure to fermentable carbohydrates and is considered a public health crisis?</p> <p data-bbox="1016 627 1354 663"><b>A:</b> Early childhood caries.</p> <p data-bbox="1016 669 1398 915"><b>Note:</b> It is important to remember, the parent should be in the oral hygiene routine of their children, especially if they cannot properly clean their teeth themselves.</p> <p data-bbox="1016 1640 1370 1675"><b>Slide 42:</b> Questions subtitle</p> <p data-bbox="1016 1724 1406 1801"><b>Slides 43-46:</b> Critical thinking activity</p>

TIME	LESSON CONTENT	NOTES-MEDIA-Q/A
	<p>Case #1: A 17 year old male presents with fractured #8 and 9. He reports playing soccer and being hit in the face with a soccer ball. He also reports not wearing a mouthguard when he plays soccer. Upon examination of the oral tissues, you notice moderate gingivitis, moderate plaque accumulation, generalized and interproximal bleeding. The patient reports that they have a busy schedule and only brush their teeth for 30 seconds a day. The patient reports not flossing. The patient also reports he shares a tube of toothpaste with his brother.</p> <p>Case #2: A 9 month infant is brought into the dental office you work at. You note that the infant's mandibular central incisors have erupted, and you ask the parent about the child's oral hygiene routine at home. The parent states that nothing is done at home to take care of the infant's teeth since they have just come in. You ask about pacifier use, and the parent states that the infant tends to spit the pacifier out and they just clean it with their mouth before giving it back to their child. It is also mentioned that the child is put to sleep with a warm bottle of milk in their crib because the baby won't sleep without it.</p> <p>Case #3: A 3 year old child and their parent</p>	<p>A: Horizontal transmission  A: Mouthguard, better homecare, separate tube of toothpaste, treatment for moderate gingivitis  A: Brush for twice a day for 2 minutes each time, flossing twice a day, use of an antibacterial/anti-gingivitis mouthrinse</p> <p>A: Horizontal transmission  A: proper homecare, parent no longer cleaning pacifier with their mouth, child no longer going to bed with a warm bottle of milk but instead a bottle of water if anything at all  A: Parent brushes the infant's teeth with a soft bristled toothbrush with a grain sized amount of fluoride toothpaste</p>

TIME	LESSON CONTENT	NOTES-MEDIA-Q/A
	<p>comes into the dental office you work at. You notice upon examination of the teeth and tissues that there is plaque accumulation and localized erythema to the primary molars. You ask the parent if they have any concerns. The parent states that their child brushes once a day by themselves. The parent also states that the child is a picky eater, and it helps when the parent takes a bite of the food before offering it to the child.</p>	<p>A: Horizontal transmission  A: Parent needs to be part of homecare, child needs to reach all areas of the mouth when brushing, parent should no longer take a bite of the child's food before giving it to them  A: Child should be brushing twice a day for 2 minutes each time with a grain sized amount of fluoride toothpaste with the help of the parent</p>

## Test Items

**Objective #1:** Apply the role of the dental hygienist to the dental hygiene care of infants, children, and adolescents.

**Test Item #1:** What should you advise a parent to do for their 8 month old infant regarding oral hygiene?

- A. Clean the infant's primary teeth with a cloth.
- B. Clean the infant's gums after each feeding.
- C. Increase pacifier use.
- D. Do not clean the infant's teeth after sugary medicine use because saliva will wash it away.

**Objective #2:** Distinguish between vertical transmission and horizontal transmission.

**Test Item #2:** Which of the following is an example of horizontal transmission?

- A. A mother cleans a pacifier with her mouth before giving it to her child.
- B. Two adolescents share a straw.
- C. A mother cleans a spoon with her mouth before giving it to her child.
- D. All of the following are examples of horizontal transmission.

**Objective #3:** Analyze the oral health needs of infants, children, and adolescents.

**Test Item #3:** A 15 year old female patient presents with traditional braces, moderate gingivitis, and #8 is fractured. She reports playing basketball at school. The patient brushes once a day and does not floss. All of the following could be causing the inflammation **EXCEPT**:

- A. Braces
- B. Inadequate oral hygiene
- C. Playing basketball
- D. Increased estrogen levels

**Objective #4:** Develop an individualized oral hygiene routine for each age category.

**Test Item #4:** Describe what should be included in the oral hygiene routine for a preschooler.

**Objective #5:** Advocate for the prevention of early childhood caries.

**Test Item #5:** A child of 4 years old comes into your practice. Upon an examination by the practice's dentist, it is determined that the child has rampant decay present in the mouth.

Describe how you would educate the child's parent on the presence and prevention of decay.

**Correct Answer Key:**

1. B
2. D
3. C
4. Answers will vary

Example answer: The oral hygiene routine for a preschooler should include the use of a pea-sized amount of fluoride toothpaste. The child should brush for 2 minutes, twice a day in the morning after breakfast and at night after dinner. The child and the caregiver should take turns brushing the child's teeth.

5. Answers will vary, but express that the rampant decay is caused by fermentable carbohydrates and inadequate oral hygiene behaviors. It will also express that child's need for an adequate oral hygiene routine at home that is supervised by the parent.

Example answer: It would be explained to the parent that their child has multiple cavities that are caused by eating too many high carbohydrate or high sugar foods without brushing afterwards. Their child needs to be brushing their teeth at least twice a day and at least rinsing with water, or drinking it, after eating if they are not going to brush. The number of high sugar foods needs to be reduced and substituted with healthier options. The parent must also be advised that they should be brushing their child's teeth after they give the child an opportunity to do so themselves. The parent must be there the whole time while oral hygiene is occurring.