Bright Futures Mini Training Module Script

Promoting Oral Health

Introduction: Key information will be highlighted that will enable learners to identify risk factors and preventive strategies to promote oral health in young children within a Bright Futures health supervision visit using resources from the American Academy of Pediatrics Bright Futures: Guidelines for Health Supervision of Infant, Children, and Adolescents, 4th Edition, and related Bright Futures Tool and Resource Kit, 2nd Edition

Take Away: The learner will identify risk factors and preventive strategies to promote oral health in young children within a Bright Futures health supervision visit.

Key Resources:
AAP Oral Health
AAP Oral Health Practice Tools (including Oral Health Risk Assessment Tool)
Bright Futures Guidelines, 4th Edition - Promoting Oral Health
Promoting Oral Health clinical implementation tip sheet


Note: The recommendations in this presentation/training do not indicate an exclusive course of treatment or serve as a standard of care. Variations, taking into account individual circumstances, may be appropriate.
Welcome to this Bright Futures mini training learning activity on Promoting Oral Health.

Please read and review the author & disclosure information before you continue.

Please complete the pre-test prior to reviewing the presentation.

For this mini training learning activity, key information will be highlighted that will enable learners to identify risk factors and preventive strategies to promote oral health in young children within a Bright Futures health supervision visit using resources from the American Academy of Pediatrics Bright Futures: Guidelines for Health Supervision of Infant, Children, and Adolescents, 4th Edition, and related Bright Futures Tool and Resource Kit, 2nd Edition.

Oral health has direct impact on systemic health in children. Best practices recommend oral health supervision beginning prenatally and continuing throughout childhood with collaboration between the primary care professional and the dental care professional.

Dental caries or tooth decay is the most common chronic disease in childhood with 21.4% of 2- to 5-year-olds having treated and untreated caries. It may surprise many that it is a transmissible and largely preventable infectious disease often passed from the mother or other caregiver with recent or current dental disease.

According to the 2020 AAP Clinical Report: Fluoride Use in Caries Prevention in the Primary Care Setting, approximately 90% of infants and young toddlers have seen a primary care professional (PCP), but only 3.6% of them have visited a dentist. However, many pediatric PCPs do not perform oral health assessments and only 4% of PCPs apply fluoride varnish in health supervision visits.

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With training and understanding of reimbursement regulations, pediatric PCPs are in a prime position to perform these oral health services.

Slide 7-Scope of Pediatrics (continued)

Oral health supervision is a recommendation on the Bright Futures/AAP Periodicity Schedule beginning at 6 months of age and continues in the primary care setting and the dental home throughout childhood. Risk factor identification, parent education, necessary fluoride supplementation, and fluoride varnish application in the primary care setting are critical in maintaining good oral health in young children.

Slide 8-Equity: Disparities Related to Oral Health

According to the Centers for Disease Control and Prevention, oral health has greatly improved in the US since the 1960’s. However, 33% of Mexican American and 28% of non-Hispanic Black children have had cavities in their primary teeth, compared with 18% of non-Hispanic White children. Children from lower income households are less likely to have dental sealants, which is an important preventive measure in children over 6 years of age.

Slide 9-Why the Disparities?

Despite significant improvements in oral health over time, some racial/ethnic and socioeconomic groups have experienced worsening oral health as a result of the social determinants of health. The most negatively impacted populations live in communities without fluoridated water and in food deserts. Low-income families experience limited access to dental care due to lack of dental insurance, transportation challenges, and the inability to leave work for dental appointments. Additionally, there are fewer dental care providers in these communities.

Slide 10-Case History

This patient is a 9-month-old infant who was brought into your office for a 9-month health supervision visit. She is healthy and is meeting typical developmental milestones for her age and her weight, length and head circumference are trending as expected on her growth curves. While the mother is discussing her daughter, you notice that the mother has inflamed gingiva and possibly tooth decay. The mother is employed full time and receives insurance through her employer. She is cared for by a close family friend while her mother is at work.

Slide 11-Oral Health Risk Factors

There are many risk factors for developing dental caries in children. Some risk factors like poverty cannot be simply modified. However, many risk factors can be mitigated by the preventive strategies that can easily be instituted and reinforced in the primary care setting. These include parent or caregiver with untreated dental decay, lack of a dental home, poor oral hygiene practices, and eating

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The key point is all children are at risk for developing dental caries even in the absence of known risk factors.

Slide 12-Dental Caries Formation

It is important to understand the pathophysiology of dental caries. For a caries lesion to develop, there must be all of the following factors present:

- A tooth – and it only takes one tooth
- Next, a diet rich in fermentable carbohydrates such as lactose sucrose and fructose found in milk, fruit and cooked starches
- And lastly, plaque – this biofilm on the surface of the tooth is colonized with cariogenic bacteria, mainly Streptococcus mutans

Over time, with these 3 ingredients, the bacteria metabolize the carbohydrates, leading to an acidic environment that demineralizes the tooth surface, leaving it weak. Together, oral hygiene, fluoride use, and healthy diet habits inhibits this process by removing the plaque, reducing the available carbohydrates, and remineralizing the tooth surface with the fluoride ion. If demineralization outpaces these preventive strategies, a white spot lesion will form and eventually lead to cavitation through the enamel and into the pulp.

Slide 13-Priorities


For the 9-month visit, these priorities include attention to parental concerns and assessing family relationships, strengths, and protective factors.

Some of these priorities are directly related to oral health. Bedtime habits, such as taking a bottle to bed, poor oral hygiene, intake of a carbohydrate-rich diet, and frequent snacking or “grazing” behaviors are linked to caries development.

Oral health is not limited to prevention of dental decay, but also dental trauma, therefore safety practices in the home are also important.

Slide 14-Bright Futures Guidelines Health Promotion: Promoting Oral Health

In addition to the 9-month priorities, Bright Futures Guidelines prioritizes the theme of Promoting Oral Health. This outlines guidelines on preventive strategies for primary care professionals. Establishing a dental home; performing an Oral Health Risk Assessment; applying fluoride varnish; educating parents on oral hygiene, proper nutrition and feeding practices; use of fluoridated water; and tips for weaning a child from the bottle are all critical to oral health promotion

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Slide 15-Self-Assessment #1

Now that you have learned about the priorities of the 9-month health supervision visit, let’s return to the patient case. Review the Bright Futures Previsit Questionnaire for the 9-month visit that was completed by Carrie’s mother. Based on this information, what are some priorities to address today in this visit?

Slide 16-Self Assessment Feedback #1

After reflecting on this question, you can listen to an expert response. “Addressing foods and feeding practices is a high priority for this visit as the mother has questions about feeding and seems motivated to learn. Education about healthy food choices, “safer” non-choking foods, and feeding habits such as eating while seated, weaning from the bottle (especially in bed), and scheduled meals and snacks, are important points to cover as they not only impact oral health but promote health and safety too. Additionally, the developmental tasks like self-feeding (fingers vs utensil), sippy cup and cup use, and advancing food textures and transition to table foods are all emerging skills.”

Slide 17-Self Assessment #2

This is the Bright Futures Oral Health Risk Assessment Tool that can be used beginning at 6 months. The Oral Health Risk Assessment tool has been completed for this infant based on the information collected during this visit. What risk factors can you identify on this tool? Is this infant at low or high risk for developing dental caries?

Slide 18-Self Assessment Feedback #2

After reflecting on this question, you can listen to an expert response. “This infant has several risk factors and is at high risk for developing dental caries. First and foremost, she has teeth. The cariogenic bacteria, Streptococcus mutans, transmitted by her mother’s untreated dental disease, colonize the plaque on the tooth surface. This bacteria feeds on fermentable sugars in this infant’s carbohydrate-rich diet with foods such as formula, juice, and fruits. It is also likely the family does not have a dental home. Her mother was not sure of fluoride content in the water, but after additional questions, it is noted that a municipal water source is used for formula preparation. This infant also has the habit of taking a bottle of formula in her crib at bedtime. It can be assumed that oral hygiene is not done after the consumption of this bottle, so the milk sugar is on the tooth surface all night.”

Slide 19-Bright Futures Implementation Tip Sheet: Promoting Oral Health

The Bright Futures Implementation Tip Sheet: Promoting Oral Health is an excellent resource to use to formulate anticipatory guidance. Here is a summary of anticipatory guidance for promoting oral health in infants.

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Slide 20-Qualities of a Dental Home

- Pediatric primary care professionals should refer every infant to a dental care professional within 6 months of the first tooth eruption or by 12 months of age, whichever is earlier. A high-quality dental home should provide family-centered, comprehensive oral health care services based on risk assessment and evidence-based guidelines. Additionally, the dental home should provide oral health anticipatory guidance and education on oral hygiene. The dental professionals should have a network of dental specialists for referrals if advanced dental care is needed.

Slide 21-Bright Futures Parent Handout

- At the conclusion of the visit, the Bright Futures Parent Education Handout, that is part of the Toolkit, can be given to the parent. This document summarizes the anticipatory guidance covered at a specified visit in plain language. For the 9-month visit, the parent is reminded what types of foods and beverages to avoid and encourage using a cup.

Slide 22-Self Assessment #3

- The Bright Futures Toolkit, has visit documentation forms, as pictured here. Review the information on the forms that reflects the health supervision visit with this infant and her mother. What are the key points to promoting oral health for this patient?

Slide 23-Self Assessment Feedback #3

- After reflecting on this question, you can listen to an expert response. “There are 4 key points that can be drawn from this case. First, a dental home with a local dental care professional should be established with the emergence of the first tooth or no later than 12 months of age. All family members and caregivers should also have a dental home. Second, using the Bright Futures Oral Health Risk Assessment tool to identify risk factors, protective factors, and clinical findings of dental problems in young children, beginning at age 6 months and continued at health supervision visits through age 6 years in the primary care setting. This information can guide the provider’s plan of care, risk factor mitigation and parent education. Third, fluoride is important in preventing caries by remineralizing the tooth surface. Fluoride can be delivered to the teeth with the use of fluoridated toothpaste twice daily and applied with fluoride varnish in the primary care setting or dental home every 3 to 6 months. Systemically, fluoride is absorbed into the teeth by drinking fluoridated water or fluoride supplementation by oral drops or tablets if the water source is poorly fluoridated. And fourth, parent education that includes oral hygiene instruction, feeding practices such as healthy snacks and mealtimes, less junk food, no to minimal juice, bottle weaning, and eliminating the bottle from the bedtime routine.”

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Slide 24-Fluoride Use

Fluoride is essential to replace the mineral loss from the tooth enamel that results from the acidic environment caused by the cariogenic bacteria colonizing the tooth plaque. Without this daily remineralization process, the tooth enamel becomes soft and vulnerable to cavitation from the acid exposure. Children receive adequate fluoride by using a combination of fluoridated toothpaste twice a day, fluoride varnish application every 3 to 6 months in the primary care or dental home setting, and most importantly, the daily intake of a fluoridated water source used for drinking or mixing formula. Water, whether bottled or tap, must contain more than 0.6 ppm fluoride ion level. The risk of fluorosis is low from these fluoride sources.

Slide 25-Dietary Fluoride Supplementation

When considering whether to prescribe dietary fluoride supplementation when fluoride intake is inadequate according to current guidelines, it is important to note all fluoride sources and the fluoride ion level contained in the drinking water. The dosage is dependent on age and fluoride ion concentration in the drinking water.

As with this patient case, it was noted on the Bright Futures Visit Documentation form that the infant’s formula was mixed with tap water from the city. You were able to discern that the fluoride in the tap water was at an adequate fluoride ion level and therefore, this infant did not require a dietary fluoride supplement at this time. These links provide access to more information about fluoridated water and risk of fluorosis that can be associated with dietary fluoride supplementation.

Slide 26-Post-test

Please complete the post-test prior to ending the presentation.

Slide 27-Resources

In summary, oral health supervision is an important part of health supervision visits. There are many resources that are available to pediatric primary care professionals. The take-away points include identifying risk factors, providing parent education, applying fluoride varnish, and referring to a dental home by age 1 year. Here are some additional resources to support your learning and practice to promote oral health.

Slide 28-Family Resources

Here are some additional resources to share with parents aimed at educating on oral health care and caries prevention. Thank you for participation in this Bright Futures learning activity.

Slide 29-References

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