Calories, Cavities and Kids:
The Role of Dental Professionals in Addressing Childhood Obesity

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American Academy of Pediatric Dentistry
Childhood Obesity

- In 1980, 6 percent of children ages 6 to 17 were obese; rose to 18 percent in 2010.
Childhood Obesity

- In 2011-2012, 17 percent of children ages 2-18 were obese
- 32 percent were either overweight or obese
- 8 percent of infants and toddlers had high weight for recumbent length
Obesity is Body Mass Index (BMI) at or above the 95th percentile for children and teens of the same age and sex.

Overweight is BMI at or above the 85th percentile.
Childhood Obesity

- 22 percent of Hispanic children
- 20 percent of non-Hispanic black children
- 17 percent of white, non-Hispanic children were found to be obese
Childhood Obesity

- Psychological and social impact
- Health risk factors as high blood pressure, high cholesterol, and pre-diabetes
Childhood Obesity

- About 6 in 10 children who are overweight develop into overweight or obese adults.
Childhood Obesity

• About 6 in 10 children who are overweight develop into overweight or obese adults

• Children ages 3-5 who are overweight or obese are 5 times more likely to be obese as an adult
Learning Objectives

1. Explain the association between sugar-containing beverages, caries and childhood obesity.

2. Describe the attitudes of both parents and oral health professionals toward nutritional and weight counseling in a dental setting.

3. Identify the barriers that prevent oral health professionals from providing interventions related to childhood obesity.

4. Recognize effective strategies for oral health professionals to address childhood obesity in collaboration with other health professionals.
Sugar-Sweetened Beverages

- SSBs are the single largest category of caloric intake in children ages 2-18
Sugar-Sweetened Beverages

- SSBs are the single largest category of caloric intake in children ages 2-18
- Teens ages 14-18 drink an average of 260 calories of added sugars from SSBs a day
Caries and Sugar-Containing Beverages
Obesity and Sugar-Containing Beverages

Obesity  SCBs
Obesity and Sugar-Containing Beverages

- A positive association between SCB consumption among children under 12 and both total and central adiposity
- Mixed results with only fruit juice and total adiposity
- The association with total adiposity strongest among children under 5

Frantsve-Hawley, et al., 2017
Caries and Obesity

Kantovitza, et al., 2006
Obesity, Caries and Sugar-Containing Beverages

Caries

Nutrition

Obesity
Recommendations

American Academy of Pediatric Dentistry

- Breast-feeding up to age 12 months
- Breast-feeding more than 12 months

Academy of Pediatrics

- No juice before one year of age
- 4 ounces a day for children ages 1-3
- 4-6 ounces for children ages 4-6
- 8 ounces for children ages 7-18
Recommendations

USDA 2015-2020 Dietary Guidelines

- Sugar less than 10 percent of daily calorie intake

World Health Organization

- Sugar less than 5 percent of total energy intake
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2016 Survey on Attitudes/Actions Toward Childhood Obesity and SSBs

Pediatric Dentist Survey
- 1,615 responses or 22 percent of the sample

Dental Hygienist Survey
- 2,361 responses or 7 percent of the sample
Actions and Intentions: Obesity

- 17 percent currently offer childhood obesity interventions
- 67 percent interested in establishing a plan
17 percent of pediatric dentists currently offer childhood obesity interventions.

Curran, et al., 2010: 3 percent of GPs and 6 percent of PDs provide obesity interventions.

67 percent of pediatric dentists interested in establishing a plan.

Curran, et al., 2010: 50 percent interested.
# Actions and Intentions: Obesity

Obesity intervention methods currently performed. (Rating Average for Always 5, Sometimes 3, Never 1)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Rating Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note signs of being overweight or obese in the child’s chart</td>
<td>4.10</td>
</tr>
<tr>
<td>Weigh children and measure their height</td>
<td>3.71</td>
</tr>
<tr>
<td>Talk to parents about observations if a child shows signs of being overweight or obese</td>
<td>3.64</td>
</tr>
<tr>
<td>Provide educational materials on childhood obesity</td>
<td>2.92</td>
</tr>
<tr>
<td>Answer Options</td>
<td>Rating Average</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Offer a referral for children identified as overweight or obese</td>
<td>2.85</td>
</tr>
<tr>
<td>Calculate and interpret a Body Mass Index (BMI) score for children ages 2 and older</td>
<td>2.75</td>
</tr>
<tr>
<td>Offer weight-related motivational interviewing or other behavior-modification programs in my practice</td>
<td>2.72</td>
</tr>
<tr>
<td>Follow up on interventions with additional contact</td>
<td>1.81</td>
</tr>
<tr>
<td>Provide parents with a self-administered screening tool for childhood obesity</td>
<td>1.61</td>
</tr>
</tbody>
</table>
Actions and Intentions: SSBs

- 94 percent of pediatric dentists currently offer interventions on SSBs
- 93 percent interested in establishing a plan
- 86 percent of dental hygienists currently offer interventions on SSBs
### Actions and Intentions: SSBs

**Intervention methods for SSBs**  
(Rating Average for Always 5, Sometimes 3, Never 1)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Talk to parents about my observations if a child shows signs of high risk for caries</td>
<td>4.86</td>
</tr>
<tr>
<td>Note signs of high caries risk in the child’s chart</td>
<td>4.80</td>
</tr>
<tr>
<td>Provide educational materials on sugar-sweetened beverages</td>
<td>3.78</td>
</tr>
<tr>
<td>Offer motivational interviewing or other behavior-modification programs about the consumption of sugar-sweetened beverages</td>
<td>3.59</td>
</tr>
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</table>
# Actions and Intentions: SSBs

**Intervention methods for SSBs**
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<tr>
<td>Provide parents with a self-administered screening tool for consumption of sugar-sweetened beverages</td>
<td>2.09</td>
</tr>
<tr>
<td>Offer a referral to a dietitian or nutritionist for children who have high consumption of sugar-sweetened beverages</td>
<td>1.55</td>
</tr>
<tr>
<td>Follow up on interventions with additional contact</td>
<td>1.42</td>
</tr>
</tbody>
</table>
Perceived Parent Expectations

- 14 percent agreed that parents are receptive to obesity counseling in the dental office.
- 7 percent agreed that parents think it is important for dentists to screen children for obesity.
- 21 percent thought screening for obesity would make them appear more professional/knowledgeable.
Perceived Parent Expectations

- 14 percent agreed that parents are receptive to obesity counseling in the dental office.
- 81 percent think parents are receptive to advice about consumption of SSBs.
- 7 percent agreed that parents think it is important for dentists to screen children for obesity.
- 84 percent agreed that parents think it is important for dentists to provide counseling about SSBs.
- 21 percent thought screening for obesity would make them appear more professional/knowledgeable.
- 72 percent agreed that SSB advice would make them appear more professional/knowledgeable.
Perceived Parent Expectations

- 9 percent had been asked for advice from parents about obesity
- 85 percent had been asked for advice about SSBs
## Perceived Parent Attitudes

<table>
<thead>
<tr>
<th>Barriers to providing healthy weight interventions (Rating average for Major Barrier 5, Minor barrier 3, Not a barrier 1)</th>
<th>Rating Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of parental acceptance of advice about weight management from a dentist</td>
<td>4.15</td>
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<tr>
<td>Fear of appearing judgmental of parents and/or child patients</td>
<td>4.14</td>
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<tr>
<td>Fear of offending the parent</td>
<td>4.10</td>
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<tr>
<td>May create parent dissatisfaction with my practice</td>
<td>3.62</td>
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</tbody>
</table>
## Perceived Parent Attitudes/Provider Response

<table>
<thead>
<tr>
<th>Barriers to providing healthy weight interventions and provider action</th>
<th>Chi-Square</th>
</tr>
</thead>
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<tr>
<td>Lack of parental acceptance of advice about weight management from a dentist</td>
<td>.0004</td>
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Actual Parent Attitudes

• Scarcity of research
• Primarily qualitative with small groups
• Generally positive
• Some negatives
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4. Recognize effective strategies for oral health professionals to address childhood obesity in collaboration with other health professionals.
Perceived Barrier/Provider Response

- Lack of time in the daily clinical schedule
- Lack of trained personnel in my office to perform this service
- Lack of personal knowledge or training about childhood obesity
- Lack of knowledge about how to start the conversation
- Lack of reimbursement from 3rd-party payers
- Lack of appropriate referral options
Perceived Barriers

- No additional fees charged to parents for the services
- Lack of available patient education materials on childhood obesity
- Dietary recommendations about childhood obesity are ambiguous and/or confusing
- Concern over legal risks
- Lack of training in communication skills
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Incentives

- More approaches that add little time to a dental visit
- More parents asking about obesity and weight counseling
- More continuing education courses on childhood obesity
- Clearer clinical guidelines on nutrition and obesity
- Stronger clinical evidence of a link between childhood obesity and dental disease
- Increased availability of patient education materials
- Increased credibility and satisfaction from parents
Strategies: Provide Interventions

- Weigh children and measure their height
- Calculate and interpret a BMI score for children ages 2 and older
- Provide educational materials on childhood obesity
- Provide parents with a self-administered screening tool for childhood obesity
- Note signs of being overweight or obese in the child’s chart
Strategies: Provide Interventions

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Strategies: Provide Interventions

• Talk to parents about observations if a child shows signs of being overweight or obese
• Offer weight-related dietary counseling in my practice
• Refer children identified as overweight or obese to a specialist
• Offer weight-related motivational interviewing or other behavior-modification programs in my practice
• Follow up weight maintenance counseling and other interventions with additional communication, such as phone calls, text messages, or emails
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Resources

National Maternal and Child Oral Health Resource Center
- http://www.oralhealth4healthyfutures.org/

Centers for Disease Control and Prevention

American Academy of Pediatrics

Motivational Interviewing Network of Trainers
- http://www.motivationalinterviewing.org/

Robert Wood Johnson Foundation
Resources

AAPD

- http://mouthmonsters.mychildrensteeth.org/
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