

# **A Childhood Obesity Intervention Model for Clinical and School-Based Dental Settings**

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*Childhood Obesity- Is There A Role for the  
Dental Profession in this Health Crisis?*

# What We Will Cover:

- How have dental providers reacted to providing health promotion interventions?
- A case example of creating and implementing a healthy weight intervention.
- What have we learned, and where to we go from here?

# Why Obesity and Dental Settings?

- Observation
  - Children's Amalgam Trial
  - Alert staff!
  - Measurements
- Opportunity
  - NIH RFA
  - Community and Academic Collaborations!



# Time For Dental Profession

*It would benefit all patients if dentists were included in the support network for people trying to lose weight.*

*Dr. Michael Glick  
Editor*

*Journal of American  
Dental Association*

*May, 2005*

# How do dental providers react to providing health promotion interventions?

- Tobacco Cessation
- Hypertension (Blood Pressure)
- Nutrition / Eating Habits / Obesity

# Tobacco Cessation

- 105 dentists – lacked knowledge of cessation programs – irrelevant to their roles – assess & advise, not manage. *(Kunzel et al, JADA Aug 2005)*
- Hygienists offer cessation counseling, not dentists. *(Rosseel et al, Br Dent J Apr 2009)*
- Majority of dentists ask about smoking, few help or refer! Barriers = lack of relevance, patient hostility, negative provider attitude toward prevention. *(Watt et al, Oral Health Prev Dent Feb 2004)*



# Hypertension (Blood Pressure)

- 207 dentists: 98% trained in school, 27% think it is a good idea, 5% measure routinely !  
*(Greenwood et al, Br Dent J Sept 2002)*
- 85% taught to measure BP, seen as important, but only 30% do it. *(Soares et al, Pac Health Dialog Mar 2004)*
- 204 dentists: 25-50% measure. Depends on patient / provider age. *(Pyle et al, Spec Care Dent Sep-Oct 1999)*

# Nutrition / Eating Habits / Obesity

- 70 pediatric dentists – nutrition important, but 25% provide counseling. Factors = training, age, confidence, gender. *(Barithwaite et al, Ped Dent Nov-Dec 2008)*
- 378 hygienists – 18% referred patients with eating disorders. Issues = perception of severity, knowledge, self-efficacy. *(DeBate et al JBHSR 2006)*
- 135 pediatric dental residents – formal curriculum in obesity management = more confidence. Will measure weight, not BMI. *(Hisaw et al, Ped Dent Nov-Dec 2009)*



# Nutrition / Eating Habits / Obesity in Children

- Survey of Maine Dentists and Hygienists
  - BMI recording: 98%=Never/rarely
  - Referral to PCP: 75%= Never/rarely
  - Routinely address weight: 63%=Never/rarely
  - Address physical activity: 52%=Never/rarely
  - Address soda consumption: 99%=Often/always
  - Address healthy eating habits: 85%= Often/always

*Maine Center for Public Health*

# Barriers to Health Promotion

- Training
- Knowledge
- Confidence
- Perception of relevance / importance
- Patient reactions / perceptions
- Lack of coordinated services and referral
- Time
- Reimbursement

# Internal / External Barriers

- Perceived external barriers
  - Office isn't set up for counseling
  - Not reimbursable
- Perceived personal barriers (self-efficacy)
  - Skills training



# Norms/Expectations/Habits and Dentistry

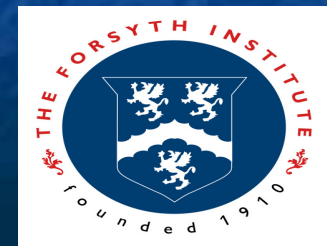
- We are a surgical profession
- We didn't go to school to be counselors
- Adversarial relationship with 3<sup>rd</sup> party payors affects reimbursement
- Inertia, habits of practice

# Overcoming Internal (Provider) Barriers

- Use national, evidence-based standards for feedback.
- Structured conversation provided by patient's responses and intervention tools.
- Intervention based on accepted behavior change theories.
- Referrals encouraged and made easy.

# **Healthy Weight Intervention For Children in a Dental Setting**

**A case example of  
creating and implementing  
a provider health promotion  
intervention.**





# Should Dental Staff Get Involved?

What on earth does it have to do with teeth?

Not their job!

Don't know what to do.

Not nutritionists.

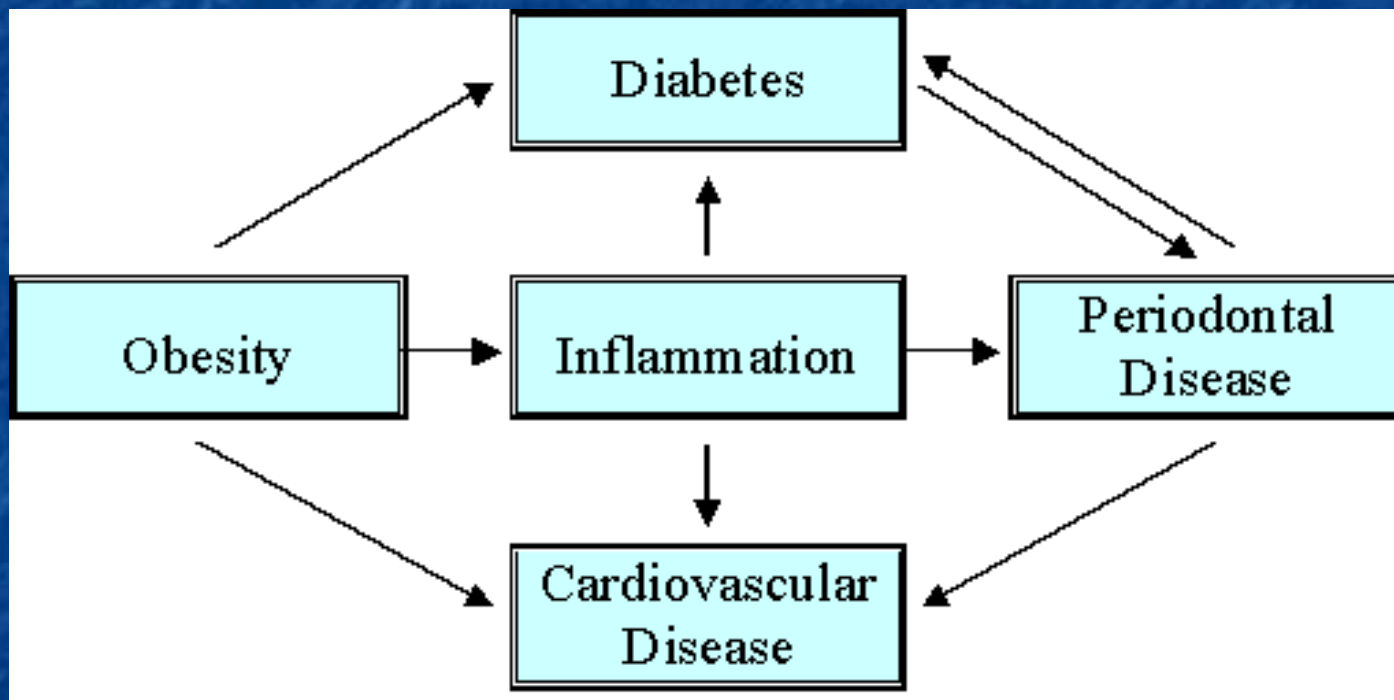
Why would they listen to us?

# Why a Dental Setting?

- Dental personnel see average child twice a year.
  - Pediatrician visits = once a year.
- Synergy between dental preventive message and healthy weight message.
- Greater opportunity (time) for dental hygienists to talk to child and parent
- Parental involvement is part of dental care.
- Close relationships between dentists, hygienists, and patients.
- We should take any additional opportunities to get the healthy weight message to our patients.

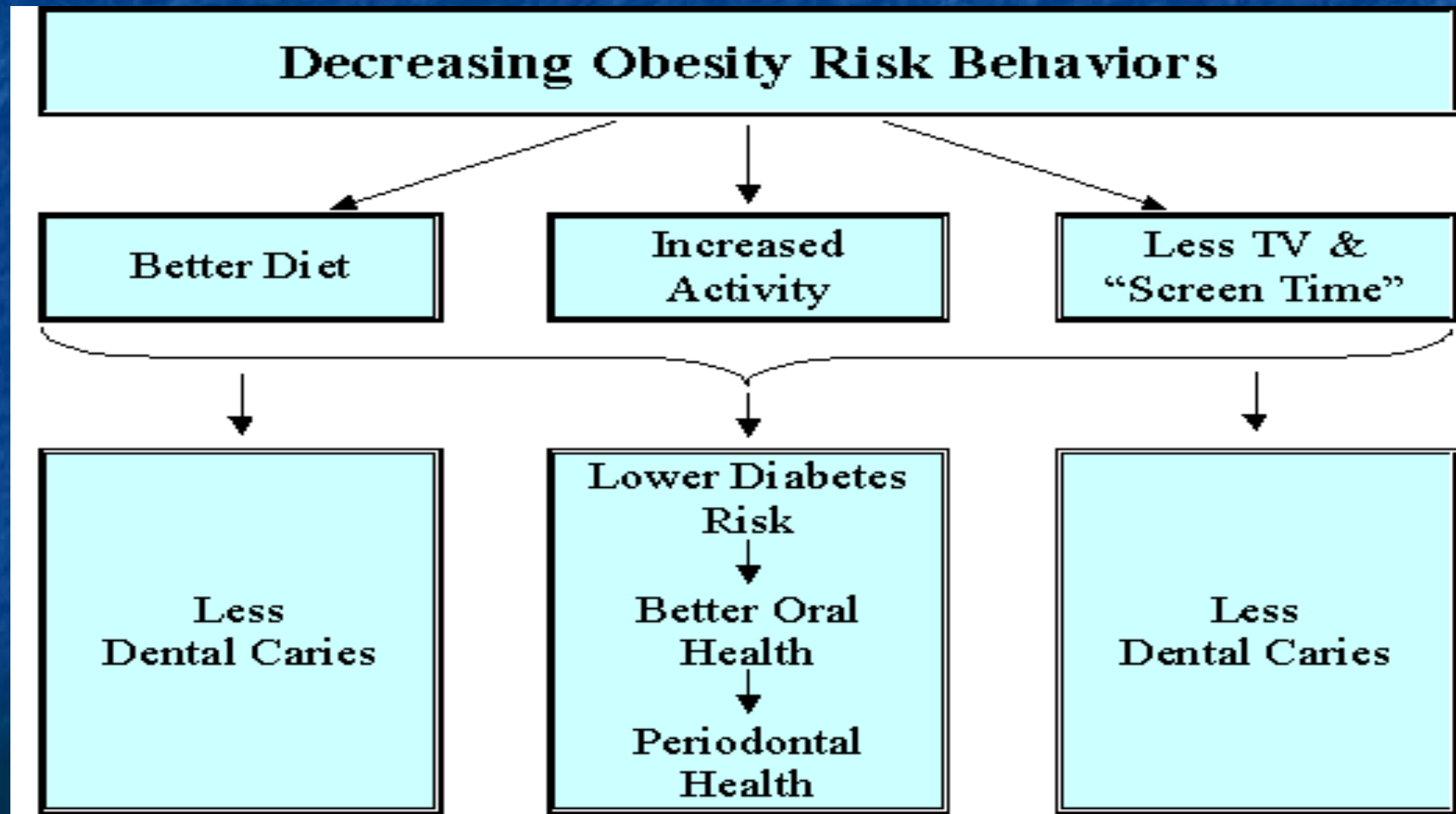


# Obesity, Systemic Disease and Oral Health





# Preventing Obesity Can Lead to Better Oral Health



# Healthy Weight Intervention For Children: Feasibility in a Dental Setting

- Pilot study
- 139 children ages 6-13
- Two community clinics in diverse urban areas
- Goals:
  - Develop an intervention for primary care dental settings
  - Assess feasibility
  - Assess acceptability

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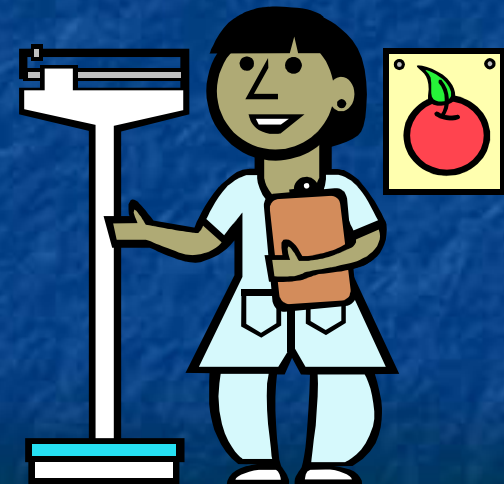
*Maine Center for Public Health*



# Healthy Weight Intervention

## ■ Components of intervention:

1. Assessment of obesity risk factors.
  - Diet, activity, screen time, meal habits.
2. Height, weight, body fat, & BMI.
3. Information and recommendations:
  - Healthy Weight Report Card
    - Goal setting
  - Referral to Pediatrician if needed.
4. Follow-up every 6 months.



# Healthy Weight Intervention

- For **ALL** children – ALL weights.
- Individualized approach shown to be best intervention.
- Motivational Interviewing Principles
  - Goal-setting = excellent tool for behavioral change.

# Goal-Setting Strategies in Nutritional Counseling

- Recognizing a need for change
- Establishing a goal
- Adopting a goal-directed activity and self-monitoring it
- Self-rewarding goal attainment

Cullen, Baranowski, Smith. *J Am Diet Assoc.* 2001.



## HEALTHY KIDS REPORT CARD



Name \_\_\_\_\_

Date \_\_\_\_\_

What you're eating and drinking and your exercises & TV habits:	How are you doing?	Choose 1 or more of these things that you are most ready to change or improve.
Breakfast most days? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Great! You have good meal habits. <input type="checkbox"/> Can you eat breakfast more often?	<input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
How many days a week I exercise or play outside: <input type="checkbox"/>	<input type="checkbox"/> Great! You're active 5 or more days a week. <input type="checkbox"/> Good! You're active 3 or more days a week. <input type="checkbox"/> Can you be active a little more?	<input type="checkbox"/> I will increase my physical activity to _____ days a week. <input type="checkbox"/> _____
How many hours I watched TV or played computer or video games yesterday: <input type="checkbox"/>	<input type="checkbox"/> Great! You watched TV or played games for 2 or less hours. <input type="checkbox"/> Can you watch TV or play games a little less?	<input type="checkbox"/> I will limit my TV and game time to _____ hours per day. <input type="checkbox"/> _____
How many fruits and vegetables I ate yesterday: <input type="checkbox"/>	<input type="checkbox"/> Great! You ate 5 or more fruits and vegetables. <input type="checkbox"/> Can you eat a few more?	<input type="checkbox"/> I will add _____ fruits or vegetables each day. <input type="checkbox"/> _____
How many snacks (like candy, cookies, chips, or cheetos) I ate yesterday: <input type="checkbox"/>	<input type="checkbox"/> Great! <input type="checkbox"/> Can you eat a few less? <input type="checkbox"/> Can you choose to eat healthier snacks?	<input type="checkbox"/> _____ <input type="checkbox"/> _____
How many juices I drank yesterday: <input type="checkbox"/>	<input type="checkbox"/> Great! You drank 1 juice or less. <input type="checkbox"/> Great! You did not drink sugary drinks. <input type="checkbox"/> Can you drink a little less?	<input type="checkbox"/> I will drink no more than _____ _____ each day. <input type="checkbox"/> _____

### YOUR HEIGHT AND WEIGHT:

Height _____ inches
Weight _____ pounds
BMI _____
BMI Percentile _____
<small>*What is Body Mass Index (BMI) Percentile? It shows how your child's weight is proportion to his or her height compared with that of other children of the same age and gender.</small>

*BMI Percentile	What you can do
85% and above	You may be overweight. Please make an appointment with your doctor to review this report.
6-84 %	You are in the healthy weight range. Annual check-ups are a good time to talk with your doctor about ways to stay healthy.
0-5 %	You may be underweight. Please make an appointment with your doctor to review this report.

### HEALTHY WEIGHT INTERVENTION

The Forsyth Institute and the Institute for Community Health

Version 10/25/09

# Feasibility of Healthy Weight Intervention: Time

- The dental hygiene visit in most offices and clinics:
  - Average: 40 minutes
  - Pediatric visits: range from 20 –45 minutes
- Healthy weight intervention plus hygiene visit: ranged from 25 to 45 minutes.

# What Changed In 6 Months?

## Risk Behaviors

Behavior	N	Baseline	6 Months	mean diff	p-value
Fruit Servings/day	78	1.92	2.36	0.44	0.01
Veggie Servings/day	78	1.27	1.56	0.29	0.009
Juice/day	78	1.58	1.88	0.31	0.08
Soda servings/day	78	1.38	0.86	-0.55	0.003
Snack food servings/day	78	1.63	1.51	-0.11	0.43
Exercise # of days/week	78	4.41	4.18	-0.23	0.44
Eat dinner at table/ # days/week	78	3.77	5.11	1.35	< 0.001
Eat Breakfast/ # days/week	78	5.15	6.06	0.91	0.01
TV/Video/comp >2 hrs/ # days/week	78	3.94	3.74	-0.19	0.66
Eat in front of TV/# days/week	78	2.85	1.97	-0.87	0.01



# Feedback from Parents at 12 Months

Feedback from Parents at 6 months (N=53)	% Yes
At last visit, we gave you info on child's BMI: Was this info new to you?*	39.6%
Was the HWI Report Card helpful for making healthy changes for your family?	98.1%
What changes were made to help your child meet goals	
Better Food Choices	96.2%
Less TV or screen time	79.3%
More Exercise	67.9%
More Breakfast	60.4%
More Dinner Together	62.3%
Do you think that your child was comfortable	
a. getting weight MEASURED at the dental office?	94.3%
b. getting weight and BMI RESULTS in the dental office?	92.5%
c. getting HW Report Card in the dental office?	96.2%

# Feedback from Parents at 12 months (cont'd)

Feedback from Parents at 6 months (N=53)	(cont'd)	% Yes
Did being part of the HW Program make your child's dental visit too long?		24.5%
Do you think the dental office is a good place to get info on healthy eating/exercise?		94.3%
Do you think the dental office is a good place to get your child's height and weight measured?		84.9%
Do you think the dental hygienist is a good person to discuss height & weight goals with you and your child?		92.5%
Would you recommend the Healthy Weight Program to other families?		94.3%

# Feedback From Providers

- Focus Groups with dentists & hygienists
- 100% - would like to implement intervention
  - Hygienists welcome expansion of their roles
  - Approve concept of standardizing healthy habits message
- 50% concerned about logistics
  - Pediatric practices had more concerns
    - Time
    - Parental attitudes
- Link with oral health viewed as important for implementation and sustainability



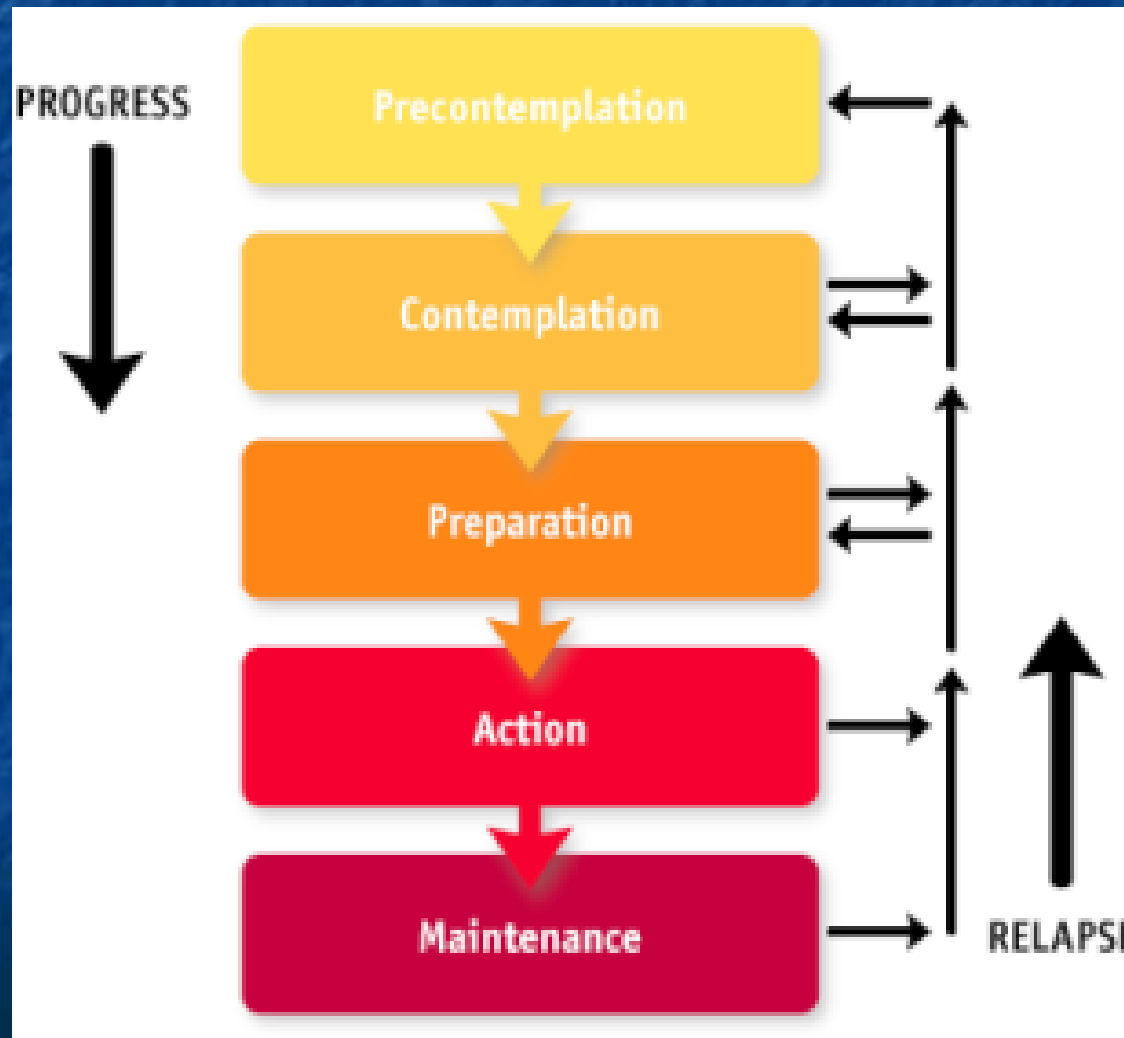
# Healthy Weight Intervention in a Dental Setting: Summary

- Adapts primary dental care model to include a healthy weight intervention.
- Adapts materials from an effective school-based program.
- Goal: Develop an intervention that can be accommodated in a child's standard dental hygiene appointment.

# What have we learned?

- Providers need:
  - Skills training
  - Package approach, simplified
  - Congruent with provider values

# The stages of change theory





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Thank You!

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