Health Literacy:
A Path to Improving Health Communication and Weight Loss Education

Alabama AAP
October 1, 2016

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What About Obesity?
• Over 69% U.S. adults are overweight or obese
• >1 in 3 children & adolescents is overweight or obese
• No state has an obesity rate <15% (the national goal)
• Obesity contributes to major causes of death in the US
• Alabama’s obesity rate: 35.6%

Disclosure Statement
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– American Cancer Society
– American College of Physicians Foundation
– NIH, LA Clinical and Translational Science Center

Questions for Today
• Is there an imbalance in patients’(parent’s) knowledge & skills and demands needed to manage health/lose weight?
• How can we improve health information and behavior change support?
• What are promising strategies to improve weight loss?
• What are ‘lessons learned’ for your setting?

Percentage of high school students who were obese*

* selected U.S. states, Youth Risk Behavior Survey, 2009 & 2013

Obesity Rates are Higher among Minorities

Percentage of high school students who were obese: 2009 & 2013

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Obesity Rates are Higher among Minorities

Current Obesity & Overweight Rates among Children by Race and Ethnicity (2015-2016)

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It took us 2000 years to get here  
But only 20 to get here

Health Effects of Childhood Obesity

Immediate health effects:
- Obese youth are more likely to have risk factors for cardiovascular disease, such as high cholesterol or high blood pressure. In a population-based sample of 5- to 17-year-olds, 70% of obese youth had at least one risk factor for cardiovascular disease.1
- Obese adolescents are more likely to have prediabetes, a condition in which blood glucose levels indicate a high risk for development of diabetes.2
- Children and adolescents who are obese are at greater risk for bone and joint problems, sleep apnea, and social and psychological problems such as stigmatization and poor self-esteem.3,4,5

Long-term health effects:
- Children and adolescents who are obese are likely to be obese as adults6,7 and are therefore more at risk for adult health problems such as heart disease, type 2 diabetes, stroke, several types of cancer, and osteoarthritis.8
- One study showed that children who became obese as early as age 2 were more likely to be obese as adults.9
- Overweight and obesity are associated with increased risk for many types of cancer, including cancer of the breast, colon, endometrium, esophagus, kidney, pancreas, gall bladder, thyroid, ovary, cervix, and prostate, as well as multiple myeloma and Hodgkin’s lymphoma.10

What is driving the increase in obesity rates?

Shifts in Food Practices in the United States

- Bigger portion sizes
- More meals eaten outside the home,
- Less exercise,
- Changes in our work life
- More fats and sugars in prepared foods
- Consumption of soft drinks-increased from 27 to 44 gal/year
- 30,000 products in supermarkets
- 12,000 new food products/year

Childhood Obesity Facts

- Childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years.1,2
- The percentage of children aged 6-11 years in the United States who were obese increased from 7% in 1980 to nearly 18% in 2012. Similarly, the percentage of adolescents aged 12-19 years who were obese increased from 5% to nearly 21% over the same period.1,2
- In 2012, more than one third of children and adolescents were overweight or obese.1

http://stateofobesity.org/adult obesity

(Open Access)
Other reasons

• Another reason we’re seeing this rise in obesity is that this is the first generation of adults that has had access to processed food since childhood.
• The tastes they developed as children continue to inform their eating choices.
• Unfortunately this may also be the first generation that is not expected to outlive their parents.

Burger King Delivers

You can now enjoy these BK burgers without leaving the couch.

Obesity is OUR Problem

• Key to management of majority of our patients
• Complicates care of other disorders
• Leads to major health complications
• Predisposes to diabetes

So what have we done to try and manage it?
Losing Weight: It’s Not Rocket Science

- People gain weight when they eat more calories than they expend.

- Yet among people who diet to lose weight 67% to 89% of people regain the weight they have lost within 5 years.

Treatment of obesity – eat less and exercise more

Drastic Measures

Literacy includes Numeracy

Lab Results
- Creatinine
- Cholesterol
- Blood pressure
- Glucose level

Dietary Concepts
- Serving sizes (1/2 c)
- Food categories
- Food labels
- Calories

Medication dosages
The Problems With Food Labels

Difficult to navigate and interpret →

What is the essential info? How and where should it be displayed?

Is it sugar they need to look for?
Added sugar per 100kcal?

What is it you want your patient to focus on?

Sodium content per 100 calories?

Nutrition Quiz – Peanut Butter

Which one of these products is the more nutritious choice?
Nutrition Quiz – Peanut Butter

Answer: Regular Peanut Butter

A little nutty…

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Peanut Butter</th>
<th>Reduced Fat Peanut Butter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium</td>
<td>150mg</td>
<td>250mg</td>
</tr>
<tr>
<td>Total Carbohydrate/sugar</td>
<td>7g</td>
<td>15g</td>
</tr>
<tr>
<td>Added Sugar*</td>
<td>5g</td>
<td>4g</td>
</tr>
<tr>
<td>Saturated Fat/Trans Fat</td>
<td>3g/0g</td>
<td>2.5g/0g</td>
</tr>
<tr>
<td>Fiber</td>
<td>2g</td>
<td>1g</td>
</tr>
<tr>
<td>Calories</td>
<td>190/33g</td>
<td>190/36g</td>
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*NaVal SCORE

Portion Sizes

- 20 years ago the plate size was 10” now it is 14”
- It’s not just fast food that has been supersized. Even chips and drinks are larger now.

BAGEL

20 Years Ago

140 calories
3-inch diameter

Today

350 calories
6-inch diameter

Calorie Difference: 210 calories

CHIESEBURGER

20 Years Ago

333 calories

Today

590 calories

Calorie Difference: 257 calories

FRENCH FRIES

20 Years Ago

210 Calories
2.4 ounces

Today

610 Calories
6.9 ounces

Calorie Difference: 400 Calories
20 Years Ago vs Today

Then and Now

Then (20 years ago)
- Breakfast
  - bagel
- Lunch
  - Burger/fries/coke
- Dinner
  - Spagetti
Total kcal=1313

Now
- Breakfast
  - bagel
- Lunch
  - Burger/fries/coke
- Dinner
  - Spagetti
Total kcal=3,175

Difference=1,862 kcal

= \( \frac{1}{2} \) pound
= 50 mile bike ride @ 18 mph or 18 mile walk @ 20 mph

Portion sizes aren’t what they used to be

What about exercise?

Treatment of obesity – exercise alone

What do Providers think?

- Providers don’t usually talk about exercise as a means to losing weight.
- That doesn’t mean it isn’t important and has many benefits, it’s that patients don’t usually do enough to make a difference or they overestimate how many calories they are burning from what they do.
**Maintaining a Healthy Weight is a Balancing Act**

**Calories In = Calories Out**

**BAGEL**

20 Years Ago

- 140 calories
- 3-inch diameter

Today

- 350 calories
- 6-inch diameter

Calorie Difference: 210 calories

*Based on 130-pound person

If you rake the leaves for 50 minutes you will burn the extra 210 calories. *

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**FRENCH FRIES**

20 Years Ago

- 210 Calories
- 2.4 ounces

Today

- 610 Calories
- 6.9 ounces

Calorie Difference: 400 Calories

*Based on 160-pound person

If you walk leisurely for 1 hour and 10 minutes you will burn approximately 400 calories. *

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**CHEESEBURGER**

20 Years Ago

- 333 calories

Today

- 590 calories

Calorie Difference: 257 calories

*Based on 160-pound person

How long will you have to walk leisurely in order to burn those extra 400 calories? *
**SODA**

<table>
<thead>
<tr>
<th>20 Years Ago</th>
<th>Today</th>
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<tbody>
<tr>
<td>85 Calories</td>
<td>250 Calories</td>
</tr>
<tr>
<td>6.5 ounces</td>
<td>20 ounces</td>
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Calorie Difference: 165 Calories

**Calories In = Calories Out**

If you wash the car for 1 hour and 15 minutes you will burn approximately 220 calories. *

*Based on 130-pound person

**Maintaining a Healthy Weight is a Balancing Act**

Calories In = Calories Out

If you work in the garden for 35 minutes, you will burn approximately 165 calories. *

*Based on 160-pound person

**CHOCOLATE CHIP COOKIE**

<table>
<thead>
<tr>
<th>20 Years Ago</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 calories</td>
<td>275 calories</td>
</tr>
<tr>
<td>1.5 inch diameter</td>
<td>3.5 inch diameter</td>
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Calorie Difference: 220 calories

**Evidenced Based Strategies & Considerations in Helping Families Change Behavior & Improve Health**

**1st Beware of Faulty Assumptions About Patient’s Need to Change Behavior**

- The patient – **ought** to change
  - **wants** to change
  - **knows how** to change
- If patient does not change – visit has failed
- Patients are either motivated to change or not
- Now is the right time to change
- I’m the expert – patient must follow my advice
Consider the Spirit of Motivational Interviewing

- Behavior change is most effective if patient, not doctor, chooses area to work on.
- Motivation to change should be elicited from patient, not imposed by provider.
- Relationship functions best as partnership, not expert/recipient.
- It is patient’s task – not provider’s – to articulate and resolve resistance.
- Rational arguments not effective in resolving resistance.

American College of Physician’s Patient Self-Management Guides:

A good model to engage people in losing weight.

Guides focused on:
- Family not disease
- ‘Need to know and do’

Help families change health behavior:
- Increase knowledge and confidence managing disease
- Help patients solve self-care problems

Bunny or Duck?
What problem does the patient need to work on?

Pictures Are Good Teaching Tools
Patients may not understand or use measurements.

What are we doing based on our research for our patients?

For the healthy living guide, the diabetes guide, and the CAD guide for the we have interviewed over:
- 100 physicians in LA, NC, and CA
- 150 patients
- 20 nurses, dieticians, therapists

Focus Is On Doing

- ‘You Can Do It’ checklist at end of each chapter
- Concrete examples of successful action plans
- Emphasis on small steps and patient choice.
Easy Framework to Help Patients Lose Weight

1. **INTRODUCE** Weight Loss Guide (briefly review).
2. **ASK** Is there anything you are willing to do this week to improve your health? Then wait, don’t jump in.
3. **COACH** patients to set goals and change behavior. Create action plan.
4. **ASSESS** confidence (7 on 10 point scale).
5. **TEACH BACK** & then write plan down in guide
6. **SET TIME** to call patient to check progress (maintain, modify, new AP)

Provider serves as partner, not expert, in helping patient change behavior

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Action Plans are Easy to Achieve & Very Specific

Help patient turn goal - lose 10 lbs - into Action Plan – I will walk 2 blocks with my family after work 3 times next week

- What: Walk
- How much: 2 blocks
- When (time of day): After work
- How often: 3 times

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“Baby Step Coaching” The Patient is in Charge

- Patients choose areas motivated to work on
- Patients need a few minutes to come up with a plan.
- At first confused by doctor asking what they want to work on.
- Avoid telling them what they need to work on or giving unsolicited advice

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Examples of Actual Baby Steps

- “I will dance like I saw in the book everyday for 2-3 songs on the radio.”
- “I will eat ½ of a candy bar instead of a whole one for my afternoon snack.”
- “Instead of eating fast food every night, I will start cooking one night a week.”
- “Two days a week I will eat sugar free ice cream instead of the regular ice cream I normally eat every night.”

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Baby Step Action Plans are Easy-to-Achieve

- Too often patients feel they are unable to do what doctors tell them to do
- Goal: make your patients feel good about their ability to make behavior changes
- Check confidence using scale from 1-10
- If < 7 – re work

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Patients Recalled Action Plans Changed Behavior And Problem Solved

225 patients, LSU, UNC, UC-SF Med Clinics
(76% minority; DM 9 yrs; BMI 36; ASC 8.6)

<table>
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<th>2 Week Calls</th>
<th>17 Week Visits</th>
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<tbody>
<tr>
<td>- Recall AP</td>
<td>- Recall AP</td>
</tr>
<tr>
<td>Behavior</td>
<td>Behavior</td>
</tr>
<tr>
<td>sustained</td>
<td>sustained</td>
</tr>
<tr>
<td>96%</td>
<td>88%</td>
</tr>
<tr>
<td>75%</td>
<td>67%</td>
</tr>
<tr>
<td>Other behavior</td>
<td>Other behavior</td>
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<td>56%</td>
<td>45%</td>
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- Most patients (89%) chose diet and exercise
- Equally effective with low and high literacy patients

Wallen, Enlighen, Davis, Wolfsberger, Arnold, Brittal, et al. in press
Brittal, Davis, Wolfsberger, Enlighen, Arnold, et al. in press
Bottom Lines: Helping Patients Change Health Behavior

- Changing behavior is a process.
- Patients & providers need practical frameworks.
- “Baby Step” approach is effective, invites engagement, problem solving, empowerment.
- Ongoing support “touch points” are essential.
- Telephone outreach improves outcomes & satisfaction.

Practice Recommendations

- Use plain language
- Focus on patients’ ‘need to know and do’ stress benefits.
- Encourage ‘buy in’/collaboration
- Use teaching tools (pictures, pamphlets)
- Use patient education materials that are understandable and actionable
- ‘Teach back’ to confirm understanding
- Be positive, motivating, encouraging

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