Evidence-based Childhood Obesity Treatment Services:
Applying Recommendations from the AAP/AHRQ Obesity Treatment & Reimbursement Conference

Webinar 1 of 2

January 20, 2017
Acknowledgements

The content of this webinar was developed from a July 2015 small conference grant R13HS02281601: “Evidence-based childhood obesity treatment: Improving access and systems of care” supported by the Agency for Healthcare Research and Quality with matching funds from the American Academy of Pediatrics Institute for Healthy Childhood Weight.

The full summary of the conference is available:

Thank you to our supporters!
Before we begin, please note a few housekeeping details:

- Please use *6 to mute your phone; if you’re using computer speakers, please mute them to avoid feedback.

- Please do not put yourself on hold, as we will be able to hear your hold music.

- Today’s webinar will be recorded.
  - The link to the recording will be shared ~1 week following today’s event.

- Questions will be answered at the end of the webinar.
  - All questions from the webinar, including those that were not answered due to time constraints, will be available in a summary document that will be posted with the recording.
Q & A During the Webinar

Please enter your question in the chat box
Meet the Faculty

Sandra G. Hassink, MD, FAAP
Past-President, American Academy of Pediatrics
Director, Institute for Healthy Childhood Weight, American Academy of Pediatrics

Denise E. Wilfley, PhD
Scott Rudolph University Professor of Psychiatry, Medicine, Pediatrics, and Psychological & Brain Sciences at Washington University in St. Louis

Amanda E. Staiano, PhD
Assistant Professor
Director, Pediatric Obesity & Health Behavior Laboratory
Pennington Biomedical Research Center
### Disclosures

<table>
<thead>
<tr>
<th>Sandra Hassink declares no conflicts of interest.</th>
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<td>Amanda Staiano declares no conflicts of interest.</td>
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<thead>
<tr>
<th>Affiliation / Financial Interest</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Denise Wilfley, PhD, Consultant</td>
<td>Shire Pharmaceuticals</td>
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<tr>
<td>Denise Wilfley, PhD, Consultant</td>
<td>Sunovion Pharmaceuticals</td>
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Polling Question
Today’s Agenda

• The Patient Perspective – Sandra G. Hassink, M.D.

• Background and Significance – Denise Wilfley, Ph.D.

• Conference Consensus – Amanda Staiano, Ph.D.

• Question & Answer
Objectives

- Examine the US Preventive Services Task Force recommendations for childhood obesity treatment
  - Including the current DRAFT USPSTF recommendations (anticipated release in 2017)
- Identify consensus for behavioral treatment
  - Review and discuss a model for effective childhood obesity treatment: family-based behavioral therapy
  - Identify essential team members for the treatment of childhood obesity
  - Discuss the format, setting, and training needs for the clinical management of obesity
Maria’s Story

Age 7
- 168 lbs
- Told she was just going through a growth spurt by pediatrician
- Mother felt blamed and concerned about daughter’s weight since she and her husband also struggle with their weight

Age 12
- 398 lbs
- Suffered unbearable stigmatization at school
- Maria and her mother completed programs together that were geared either toward adults or children, except for one which included the entire family but was not of sufficient duration

Age 14
- 443 lbs; BMI 63.6
- Gastric bypass surgery was her only option after spending countless dollars out-of-pocket on ineffective, insufficient, or non-evidence based programs

Maria’s story could have been much different. If she had access to an evidence-based treatment and was reimbursed for this care, she may have been prevented from severe obesity tracking into adolescence.
Maria’s Growth Chart

Age 3; BMI = 23.9

Age 7; BMI = 42.4

Age 9; BMI = 48.8

Age 14; BMI = 65.4

Severely Obese

Obese

Overweight
Childhood Obesity is a Disease Putting One At Risk for 30+ Co-morbidities
# AHRQ Conference Overview

<table>
<thead>
<tr>
<th>Pre-conference</th>
<th>Conference</th>
<th>Post-conference</th>
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<tbody>
<tr>
<td>43 Multi-sector stakeholders convene virtually</td>
<td>July 8-9, 2015 in-person meeting</td>
<td>Synthesis with work group and on-going dissemination</td>
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</tbody>
</table>

- **Survey**
- **Briefing Book**
- **Webinar**
Pre-Conference Survey of Stakeholders
Survey on the Implementation of the USPSTF Recommendations for Childhood Obesity Treatment

Facilitators

Barriers
Survey on the Implementation of the USPSTF Recommendations for Childhood Obesity Treatment

**Barriers**
1. Lack of insurance coverage
2. Cost of treatment
3. Lack of provider training

**Facilitators**
1. Stakeholder support for innovation
2. Attitudes, beliefs, and knowledge of the intervention

Background & Significance
RECOMMENDATION: The USPSTF recommends that clinicians screen children aged 6 years and older for obesity and offer them or refer them to intensive counseling and behavioral interventions to promote improvements in weight status (grade B).

Recommended Interventions
Provide or refer patients to comprehensive moderate- to high-intensity programs (>25 contact hours) that include dietary, physical activity, and behavioral counseling components.

Height and weight, from which BMI is calculated, are routinely measured during health maintenance visits.
The Systematic Review for USPSTF

Comprehensive, Medium to High Intensity Interventions (26-75 Hours)
- Savoye et al (2007)
- Nemet et al (2005)

Comprehensive, Low Intensity Interventions (11-25 Hours)
- Celio Doyle et al (2007)
- Senediak et al (1985)

Comprehensive, Very Low Intensity Interventions (<10 Hours)
- McCallum et al (2007)

= overall effect size
= individual study effect size

Favors Intervention  Favors Control

Adapted from Figure 3, Whitlock et al., 2010, Pediatrics.
Mounting Evidence
Support for Higher Dose

2012—Ho et al. (38 studies)
- Summarized the positive effects of comprehensive interventions on cardiometabolic outcomes as well as on weight outcomes in children
- Showed that weight loss was greater when the duration of treatment was longer than 6 months

Ho et al., 2012 Effectiveness of lifestyle interventions in child obesity: systematic review with meta-analysis. *Pediatrics*.

2014—Janicke et al. (20 studies)
- Showed that comprehensive, family interventions have positive effects on child weight
- Looked at moderators:
  - Dose (duration, number of sessions, time in treatment) was positively related to effect size
  - Individual and in-person comprehensive family interventions were associated with larger effect sizes

Support for Higher Dose

• **2016—Mitchell et al. (18 studies)**
  - Showed that pediatric overweight/obesity interventions in primary care settings can be effective for BMI reduction
  - Parents were targeted as change agents for the child’s BMI reduction in all studies
  - All studies incorporated behavioral components (e.g., specifying behaviors to change, reinforcing positive behaviors, setting goals, changing the environment, monitoring behaviors, promoting self-management skills)

• **Looked at moderators:**
  - Dose (number of treatment contacts, duration of treatment, and number of visits with a pediatrician) was a significant moderator of treatment effect
  - Larger effect sizes were associated with more treatment contacts, longer treatment duration, and greater number of treatment sessions with a pediatrician

Higher intensity (>26 contact hours), multi-component behavioral interventions are effective

Components across interventions included:

• sessions targeting both the parent and child (separately, together, or both);
• offered individual, family, and group sessions;
• encouraged the use of behavioral skills and
• included supervised physical activity sessions.
Behavioral interventions with > 52 contact hours demonstrated greater weight loss and some improvements in cardiometabolic measures.
Children’s Weight Change (zBMI, BMI, kg, %ile) in Behavioral Weight Loss Intervention Trials

*Study-reported repeated measures or adjusted analysis demonstrated a statistically significant effect.
## Necessary Weight Change for Normalization of Weight Status in Children

<table>
<thead>
<tr>
<th>Age</th>
<th>90th</th>
<th>95th</th>
<th>97th</th>
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<tbody>
<tr>
<td><strong>BOYS</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8-9 y.o.</td>
<td>5.38</td>
<td>-0.09</td>
<td>-4.72</td>
</tr>
<tr>
<td>9-10 y.o.</td>
<td>6.59</td>
<td>-0.35</td>
<td>-6.35</td>
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<tr>
<td>10-11 y.o.</td>
<td>6.06</td>
<td>-2.23</td>
<td>-9.44</td>
</tr>
<tr>
<td>11-12 y.o.</td>
<td>7.08</td>
<td>-2.69</td>
<td>-11.13</td>
</tr>
<tr>
<td>12-13 y.o.</td>
<td>8.60</td>
<td>-2.54</td>
<td>-12.10</td>
</tr>
<tr>
<td><strong>GIRLS</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8-9 y.o.</td>
<td>7.10</td>
<td>1.04</td>
<td>-4.01</td>
</tr>
<tr>
<td>9-10 y.o.</td>
<td>7.41</td>
<td>-0.11</td>
<td>-6.39</td>
</tr>
<tr>
<td>10-11 y.o.</td>
<td>7.87</td>
<td>-1.15</td>
<td>-8.66</td>
</tr>
<tr>
<td>11-12 y.o.</td>
<td>7.28</td>
<td>-3.37</td>
<td>-12.24</td>
</tr>
<tr>
<td>12-13 y.o.</td>
<td>5.84</td>
<td>-6.42</td>
<td>-16.64</td>
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Stronger Effects with Higher Treatment “Dose”

**Study 1.** First large-scale test of effects of extended, mixed format treatment on weight loss maintenance in children

- 36 hours of contact better than 20 hours at both the short- and long-term assessment time points, and parent success was associated with child long-term success

**Study 2.** Multi-site trial of extended, mixed format moderate- to high-intensity treatment designed to specifically study the effects of treatment intensity and content on child weight loss maintenance

- Three treatment conditions
  - SFM+ HIGH (48 contact hours)
  - SFM+ LOW (32 contact hours)
  - Health Education CONTROL (32 contact hours)

Abbreviations: % OW = Percent overweight, SFM* = Enhanced social facilitation maintenance. Note: Reductions in the continuous percent overweight outcomes are shown. * = Estimate is significant: *p<.05; **p<.001.

Wilfley et al., 2007, *JAMA*; Wilfley et al., in prep, *Dose, content, and mediators of family-based treatment for childhood obesity: A multi-site randomized controlled trial*
Stronger Effects with Higher Treatment “Dose”

Abbreviations: %OW = Percent overweight. SFM+ = Enhanced social facilitation maintenance.
*p=.035; **p<.001

Wilfley et al., in prep, Dose, content, and mediators of family-based treatment for childhood obesity: A multi-site randomized controlled trial
Stronger Effects with Treating the Parent & Child

Epstein et al., 1994, *Health Psychology.*
Bridging the Gap Between Evidence and Clinical Practice
Conference Consensus
Key Consensus Recommendations

1. Family treatment model is critical
2. Interventions need to be comprehensive and behavioral
3. Treatment should consist of >25 hours of contact with flexibility to adjust intensity of contact based on individual family needs
4. Comprehensive and consistent training is needed for staff teams delivering obesity treatment

Consensus 1: Family Treatment Model

• First line of treatment for children and adolescents

• Targets reduction in energy intake and increase in energy expenditure in both youth and caregivers

• Core strategies: self-monitoring, reinforcement for goal achievement, and stimulus control

Epstein et al., 1990, JAMA; Epstein et al., 2014, Childhood Obesity; Epstein et al., 2007, Health Psychology; Best et al., 2015, Health Psychology; Jelalian et al., 2010, Pediatrics; Gunnarsdottir et al., 2014, Laeknabladi.
Benefits of Family-based Behavioral Weight Loss

- Demonstrated short- and long-term effectiveness for youth with obesity
  - Impacts weight, psychosocial health, physical health (e.g., blood pressure, cholesterol, insulin sensitivity), and energy-balance behaviors
- Provides concurrent treatment for parents with obesity and can generalize to other family members
- More cost effective than separate treatment of obesity in the parent and child

Epstein et al., 1990, JAMA; Epstein et al., 2014, Childhood Obesity; Epstein et al., 2007, Health Psychology; Best et al., 2015, Health Psychology; Jelalian et al., 2010, Pediatrics; Gunnarsdottir et al., 2014, Laeknabladid.
# Consensus 2: Building a Comprehensive Team

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Suggested Types of Providers</th>
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| Pediatrician or primary care provider | Physician  
Nurse Practitioner  
Physician Assistant |
| Behavioral interventionist   | Behavioral/mental health specialist (e.g. psychologist, social worker, master’s level counselor)  
Registered dietitian  
Exercise professional  
Health coaches/educators |
| Subspecialist                | Medical Subspecialist  
Mental Health Specialist  
Exercise Physiologist  
Registered Dietitian |
| Care Coordinator             | Interventionist  
Navigator  
Case worker  
Registered nurse |

Consensus 3: Intensity >25 hours of contact with flexibility to adjust based on individual family needs

Setting:
- Primary care medical home
- Tertiary care center
- Community setting (medical neighborhood)

Format:
- Individual family or mixed-format approaches

Consensus 3: Intensity >25 hours of contact with flexibility to adjust based on individual family needs

- **Primary Indicator:** Stabilize/reduce relative weight
- **Secondary, Patient-Centered Indicators:**
  - **Psychosocial** (e.g., quality of life, body image)
  - **Biomedical outcomes** (e.g., progression of medical comorbidities)
  - **Patient engagement** (e.g., satisfaction)
  - **Behavior Change** (e.g., dietary and physical activity goal attainment)
  - **Parent Change** (e.g., weight, psychosocial, biomedical)
- Evaluate, collect and share outcomes with patients
Consensus 4: Comprehensive and Consistent Training

- Training specialized based on role
- Cultural and developmental competencies
- Standardized training, certification, and monitoring system
- Ongoing consultation and coaching from experts
For Future Consideration

- Training needs to be scaled up and widely available
- Regions will function according to priority and capacity
- Political landscape is ever-changing
- Reimbursement pathways are just beginning

  • Join us on February 16 @ 12 noon CT for Webinar 2
Questions