Defining Success in Pediatric Weight Management

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Research Rounds
Everyone has a role

- Pediatricians
- Workplaces
- Food/Beverage companies/advertisers
- Restaurants
- Schools
- Medical Schools, PA schools, NP programs, residency programs
- Obstetricians
- Hospitals
- Primary care clinicians and office staff
- Pediatric specialists
- Surgeons
- Government
- Child Protective Services
- Legislators
- City Planners
- Insurance Companies
- Philanthropists and granting agencies
- Researchers
- Media
- Advocates
- Professional organizations – NACHRI, AAP, APA
- Parents
- Patients
Definition of Success

• Patient outcomes
  – Slow weight gain, stop, lose, normal range BMI
  – Improved fitness, body fat %, Resp. function, QOL
  – Co-morbid conditions
    • Diagnosed, Treated, Resolved by BMI change
  – Improved mental health
    • Diagnosed, Treated, Resolved by BMI change
  – Improved family health
Definition of Success

• Co-morbid conditions
  • Diagnosed, Treated, Resolved by BMI change
    – Blood pressure
    – Sleep
    – Constipation/GERD
    – Headaches
    – Asthma
    – Vitamin D deficiency/Anemia
    – Menstrual irregularity
    – Fatty liver
    – Pre-diabetes, Type II DM
    – Metabolic syndrome, lipid abnormalities, hyperinsulinism, acanthosis nigricans
Definition of Success

• Improved mental health
  • Diagnosed, Treated, Resolved by BMI change
    – Pediatric Symptom Checklist
    – Depression
    – Anxiety
    – ADHD
    – Trauma, grief, loss
    – ODD
    – Self esteem
    – Bullying
    – Self efficacy, confidence
Definition of Success

• Improved family health
  • Weight/BMI change
  • Improved nutrition and activity
  • Family communication
  • Parenting skills
  • Mental health
  • Smoking cessation
Definition of Success

• Satisfaction
  • Patients, Families
  • PCPs
  • Specialists
  • Administrators
  • Funders
  • Staff
  • Community
Definition of Success

• Outreach
  – Quality improvement
  – Contributions to evidence base, research
  – Sharing of expertise with other programs/team members
  – Teaching PCPs, office staff, medical students, residents, specialists
  – Community improvement and activism
  – Media
  – Legislative advocacy
Published outcomes

• Effectiveness of Weight Management Interventions in Children: A Targeted Systematic Review for the USPSTF
  – *Pediatrics* published online Jan 25, 2010;
  – Evelyn P. Whitlock, Elizabeth A. O'Connor, Selvi B. Williams, Tracy L. Beil and Kevin W. Lutz
Published outcomes

• Whitlock 2010

  Comprehensive behavioral interventions of medium-to-high intensity were the most effective behavioral approach with **1.9 to 3.3 kg/m2 difference favoring intervention groups at 12 months**. More limited evidence suggests that these improvements can be maintained over the 12 months after the end of treatments and that there are few harms with behavioral interventions.
Published outcomes

Whitlock 2010

- USPSTF – 2005, no sufficient evidence for screening for overweight in children
- 2008 Whitlock AHRQ review of 4 trials showing positive results
- USPSTF decides to update the 2005 review
- 11 trials, age 4-18 with wt. outcomes, 6 good, 5 fair, small (3 with >40 pts.)
- 3 mod-high intensity programs (26-75, >75 hours)
- 3 very-low intensity programs (<10 hours) pooled showed short term sig.
- Limited evidence showing reduction in risk factors do not occur (other than reduction in insulin resistance in mod-high intensity programs)
- No evidence of harm
HDVCH Healthy Weight Center

- Opened April 2010
- Stage 3 treatment and research center
- Complete medical assessment
- Patty
- Melissa
- Emily
- Erin
- Lucie
- Adelle
- Jared
- Tracy
- Collaborate with other HDVCH specialists
  (Endo, Psych, Sleep, Ortho, Pulm, GI, Nephro, Neuro, Card, Genetics)
Referral Process

- Equal to or over the 95\textsuperscript{th} %ile for BMI
- Age 2-17
- Well-child visit within 2 years
- Referred from PCP
- Scheduled for consult visit
- Treatment initiated
Program Design

- Comprehensive two-visit initial assessment
- Visits from MD, RD, EP, LMSW and psychologist
- PE, PFT, anthropometrics, body fat
- Initial nutrition and activity behavioral assessments
- Psychosocial functioning, FNPA scale
- Maximal exercise (VO$_2$ Max) testing with treadmill
- Start or complete the laboratory work-up (FBG, FLP, AST, ALT, Insulin, HgbA1C, TSH, Vit D 25OH)
- Refer to specialists, mental health provider as needed
Treatment Dose

• Typical medical weight management track
  – 8 center visits (every 4-6 weeks) over 9-12 months with the multidisciplinary team
  – +/- NEW ME

• Behavioral Strategies track (cognitively impaired, mental illness)
  – 8 center visits (every 4-6 weeks) over 9-12 months led by pediatric psychologist and supported by RD, LMSW and EP along with limited physician involvement
  – +/- NEW ME

• Toddler track (patient age <5)
  – 8 visits (every 3-5 weeks) over 6-9 months led by pediatric psychologist focused on parenting strategies
NEW ME Program

• Age-specific group classes, twice weekly, for families of current patients of 14 weeks in length
• Downtown Grand Rapids YMCA
• Set behavioral change goals with RD and EP with assistance from MSW and YMCA staff