Florida Medical Association
Council on Healthy Floridians

The Obesity Crisis:
Reports from the Frontline
Treating Children & Teens

Presented by:

John J. Lanza, MD, PhD, MPH, FAAP

Director, Florida Department of Health in Escambia County

Prepared by: Marie B. Mott, JD, MS, RD, CSSD

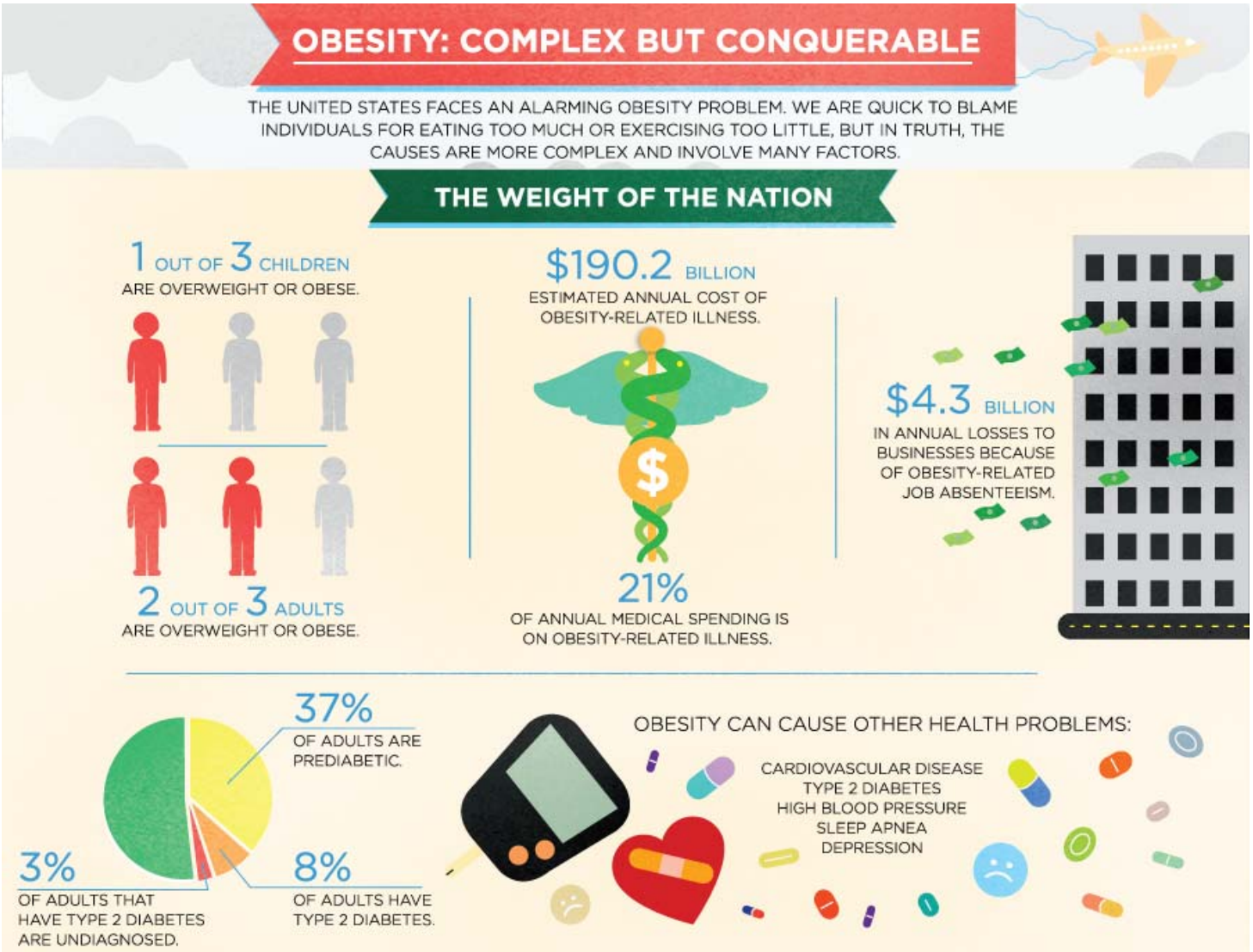
July 26, 2013

The Obesity Problem

- **In 2010 two-thirds of U.S. adults were overweight or obese.[1]**
- **In 2010, more than one third of U.S. children and adolescents were overweight OR obese.[2]**

1. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010. *Journal of the American Medical Association* 2012;307(5):483-490.
2. Office of the Surgeon General. The Surgeon General's Vision for a Healthy and Fit Nation. [pdf 840K]. Rockville, MD, U.S. Department of Health and Human Services; 2010.

The Obesity Problem



The Obesity Problem

- **Worldwide, 22 million children under age 5 were estimated to be overweight in 2007.[3]**
- **Evidence suggests that most obesity is established during preschool yrs.[3]**
- **1 in 5 obese 4 year olds will become obese adults.[3]**

1. Lanigan J, Barber S, Singhal A. Session 3 (Joint with the British Dietetic Association): Management of obesity Prevention of obesity in preschool children. Proc Nutr Soc. 2010 Feb 17:1-7. [Epub ahead of print].

The Obesity Problem

- **25% of obese adults were overweight as children.[4]**
- **If overweight begins before 8 years of age, obesity in adulthood is likely to be more severe. [4]**

4. Freedman DS, Khan LK, et. al. The Bogalusa Heart Study. Pediatrics 2001;108:712–718.

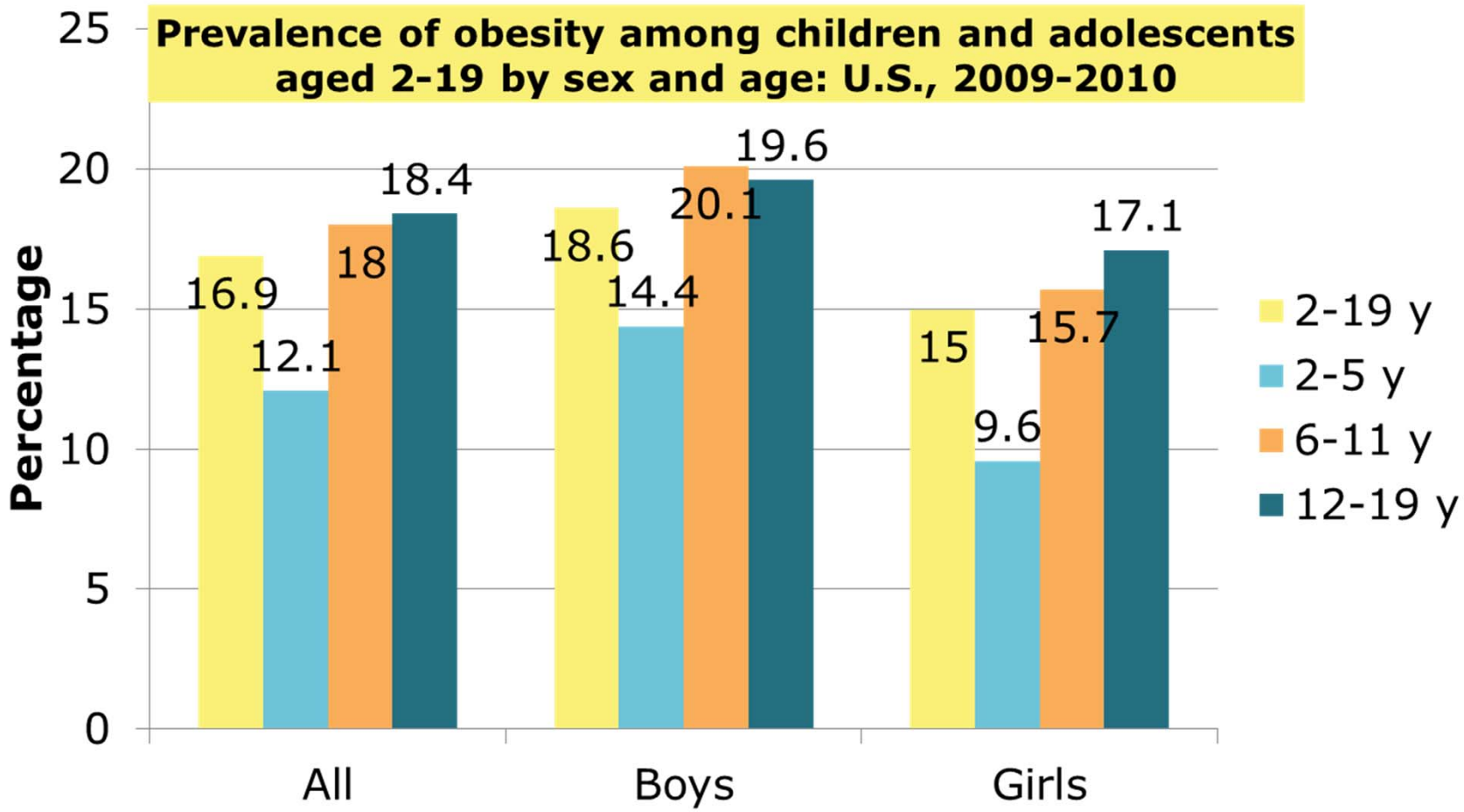
The Obesity Problem

- **Childhood obesity in the U.S. has more than doubled in children and tripled in adolescents in the between 1980 and 2010.[2, 5]**
  - **Obese 6–11 year-olds ↑ from 7% to nearly 18%.**
  - **Obese 12–19 year-olds ↑ from 5% to 18%.**

5. National Center for Health Statistics. Health, United States, 2011: With Special Features on Socioeconomic Status and Health. Hyattsville, MD; U.S. Department of Health and Human Services; 2012.

The Obesity Problem

The Obesity Problem



Ogden CL, Carroll MD, Kit BK, & Flegal, KM. Prevalence of Obesity in the United States, 2009–2010. NCHS Data Brief No. 82, January 2012

The Obesity Problem

- **Children who are obese are more likely to be obese as adults.[6, 7]**
- **At greater risk for "adult" health problems:[1]**
  - **Heart disease**
  - **Type 2 diabetes**
  - **Stroke**
  - **Many cancers**
  - **Osteoarthritis**

6. Guo SS, Chumlea WC. Tracking of body mass index in children in relation to overweight in adulthood. American Journal of Clinical Nutrition 1999;70:S145–148.
7. Freedman DS, Kettel L, Serdula MK, Dietz WH, Srinivasan SR, Berenson GS. The relation of childhood BMI to adult adiposity: the Bogalusa Heart Study. Pediatrics2005;115:22–27.

The Obesity Problem

- Obese children & adolescents are also at greater risk for:[1,8,9]
  - bone and joint problems
  - sleep apnea
  - social and psychological problems

  - In a population-based sample of 5- to 17-year-olds, 70% of obese youth had at least one risk factor for cardiovascular disease.[10]

8. Daniels SR, Arnett DK, Eckel RH, et al. Overweight in children and adolescents: pathophysiology, consequences, prevention, and treatment. Circulation 2005;111;1999–2002.
9. Dietz WH. Overweight in childhood and adolescence. New England Journal of Medicine 2004;350:855-857.
10. Freedman DS, Zuguo M, Srinivasan SR, Berenson GS, Dietz WH. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: the Bogalusa Heart Study. Journal of Pediatrics 2007;150(1):12–17.

The Obesity Problem

Contributing Factors

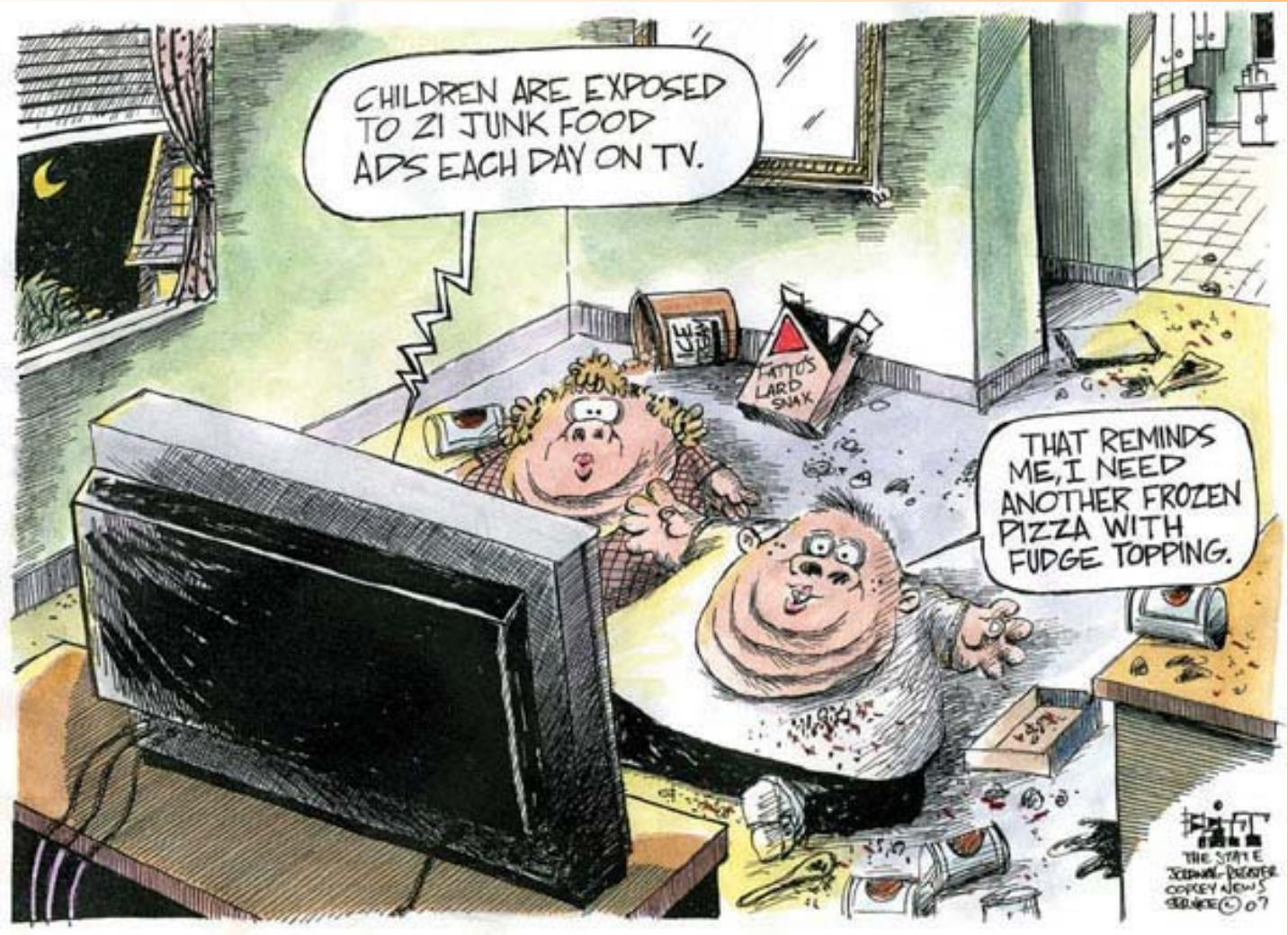
- Centers for Disease Control and Prevention
  - Overweight and obesity are the result of "caloric imbalance"—too few calories expended for the amount of calories consumed—and are affected by various genetic, behavioral, and environmental factors.[2,8]

Contributing Factors

- Centers for Disease Control and Prevention
  - The dietary and physical activity behaviors of children and adolescents are influenced by many sectors of society, including:
    - Families
    - Communities
    - Schools
    - Child care settings
    - Faith-based institutions
    - Medical care providers
    - Government agencies
    - The media
    - Food and beverage industries
    - Entertainment industry.

Contributing Factors

Contributing Factors



Contributing Factors

- Center for the Study of Social Policy:
  - Poverty
  - Limited opportunity for physical activity & limited access to safe places to play
  - Insufficient access to affordable produce
  - Unhealthy eating habits

Contributing Factors

- National Center for Children in Poverty:
  - Demographic factors:
    - Low income families
    - Race &/or ethnicity
  - Societal/Environmental factors
    - Food environment
      - ↑ consumption of convenience foods
      - ↑ consumption of fast foods
      - ↑ consumption of sugar-sweetened beverages
      - ↑ portion sizes
      - ↑ child-targeted marketing of unhealthy foods
      - ↑ COST of healthful foods (v. convenience/fast)
      - Ltd. access to healthful foods for many families

Contributing Factors

- National Center for Children in Poverty:
  - Built environment
    - ↑ time spent in vehicles
    - ↑ time spent indoors due to lack of safe environment to walk to school, play outdoors, etc.
  - School/Child care environment
    - Foods served in schools & CCCs
    - ↓ time & resources for PA in schools & CCCs

Contributing Factors

Contributing Factors

- National Center for Children in Poverty:
  - Family environment
    - Single & 2-earner families may lead to
      - ↑ use of convenience/fast foods
      - ↑ time in child care
      - ↑ screen time

Contributing Factors

Contributing Factors

Contributing Factors

Decreasing the Incidence of Child & Adolescent Obesity

- Center for the Study of Social Policy
  - Promote policies that increase access to affordable healthy foods
  - Support healthy school initiatives
  - Support healthy community design

Decreasing the Incidence of Child & Adolescent Obesity

- National Initiatives
  - Let's Move
    - www.letsmove.gov
  - WE CAN
    - wecan.nhlbi.nih.gov
  - HHS Healthiest Weight Initiative
    - http://www.hhs.gov/secretary/about/help.html

Decreasing the Incidence of Child & Adolescent Obesity

- Streamlined messaging for practitioners, promoters & parents
  - 5-2-1-0
    - www.letsgo.org (Maine)
  - 5-2-1-Almost None
    - www.kidshealth.org (Nemours)
  - 9-5-2-1-0
    - www.95210.org (Leon & Collier Counties)
  - Strong 4 Life
    - www.strong4life.com (Children's Healthcare of Atlanta)

Decreasing the Incidence of Child & Adolescent Obesity

- Streamlined messaging for practitioners, promoters & parents
  - 5-2-1-0 • 5-2-1-Almost None • 9-5-2-1-0
    - (Get at least 9 hours of sleep per night)
    - Consume 5 servings of fruits and vegetables daily
    - Limit recreational screen time to 2 hours per day
    - Get at least 1 hour of physical activity per day
    - Consume 0 sugary drinks
      - "Almost none" allows 2 servings per week

Decreasing the Incidence of Child & Adolescent Obesity

- Streamlined messaging for practitioners, promoters & parents

Strong 4 Life

- 4 building blocks for everyone's health
  - Eat right
  - Be active
  - Get support
  - Have fun
- 4 Healthy Habits
  - Make half your plate veggies and fruits
  - Be active for 60 minutes
  - Limit screen time to one hour
  - Drink more water; Limit sugary drinks

Decreasing the Incidence of Child & Adolescent Obesity

Decreasing the Incidence of Child & Adolescent Obesity

- Treating Overweight and Obesity
  - Strategies that all practitioners should employ:
    - All physicians should address weight and lifestyle issues with all patients, regardless of presenting weight.
    - All children 2-18 with BMI in 5-84% for age & gender should follow lifestyle guidelines for overweight/obesity prevention.
    - Treatment of overweight/obesity requires a staged approach based on multiple factors

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Decreasing the Incidence of Child & Adolescent Obesity

- Treating Overweight and Obesity
  - "Staged" Interventions for children (2-19y) with BMI ≥85%.
    - Requires some 'systems implementation' at the practice level.
  - Stage at which a patient might enter treatment may vary due to readiness and comorbidity factors.
  - Outcomes sought include changes in habits and improvement in BMI percentile.

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Decreasing the Incidence of Child & Adolescent Obesity

- Treating Overweight and Obesity
  - Systems implementation might include:
    - Implementing practice procedures related to screening & documenting BMIs on all patients.
    - Identifying resources for office use with patients &/or referral.
    - Implementing practice procedures to measure outcomes.

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Decreasing the Incidence of Child & Adolescent Obesity

- Treating Overweight and Obesity
  - Stage 1 – *Prevention Plus*
    - Health Professional works with patients and families to change lifestyle habits.
      - 5-2-1-0
      - Healthy, home-prepared meals
      - ↑ frequency of family meals (at the table)
      - Healthy, daily breakfast consumption
      - Family makes lifestyle changes
    - Measurement at more frequent intervals (v. well-child with BMI in healthy percentile range)

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Decreasing the Incidence of Child & Adolescent Obesity

- Treating Overweight and Obesity
  - Stage 2 – *Structured Weight Management*
    - Similar to Stage 1, but with more intensive support and monitoring.
    - Nutrition & Activity goals may be more specific and include:
      - Planned/structured meal & snack plan
      - Energy/macronutrient recommendations
      - Planned, supervised physical activity/active play (60 minutes)
      - Restricted screen time ≤60 minutes/day
      - Monitoring (logs) & reinforcement for achieving targeted behaviors
    - Measurement at more frequent intervals (v. Stage 1).

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Decreasing the Incidence of Child & Adolescent Obesity

- Treating Overweight and Obesity
  - Stage 3 – *Comprehensive Multidisciplinary Intervention*
    - Increased intensity of behavior changes – external program.
    - Nutrition & Activity interventions and goals are usually similar to Stage 2 *plus*:
      - Negative energy balance nutrition & physical activity plan.
      - Method of parental support/participation in behavior modification
    - Interdisciplinary team approach
    - Frequent visits.
      - Weekly for 8-12 weeks
      - Extend to monthly to maintain new habits

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Decreasing the Incidence of Child & Adolescent Obesity

- Treating Overweight and Obesity
  - Stage 4 – *Tertiary Care Intervention*
    - Most extreme types of interventions
    - Rarely indicated; Used only in most severe cases:
      - Medications
      - Very Low-Calorie Diet
      - Surgical intervention
    - Refer out to Pediatric Weight Management Centers for these types of interventions

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Decreasing the Incidence of Child & Adolescent Obesity

TABLE 8 Weight Goals and Intervention Stages, According to Age and BMI Categories

Age	BMI Category	Weight Goal to Improve BMI Percentile[a]	Initial Intervention Stage	Highest Intervention Stage
<2 y	Weight for height	NA	Prevention counseling	Prevention counseling
2–5 y	5th–84th percentile or 85th–94th percentile with no health risks	Weight velocity maintenance	Prevention counseling	Prevention counseling
	85th–94th percentile with health risks	Weight maintenance or slow weight gain	Prevention Plus (stage 1)	SWM (stage 2)
	≥95th percentile	Weight maintenance (weight loss of up to 1 lb/mo may be acceptable if BMI is >21 or 22 kg/m^2)	Prevention Plus (stage 1)	CMI (stage 3)
6–11 y	5th–84th percentile or 85th–94th percentile with no health risks	Weight velocity maintenance	Prevention counseling	Prevention counseling
	85th–94th percentile with health risks	Weight maintenance	Prevention Plus (stage 1)	SWM (stage 2)
	95th–99th percentile	Gradual weight loss (1 lb/mo or 0.5 kg/mo)	Prevention Plus (stage 1)	CMI (stage 3)
	>99th percentile	Weight loss (maximum is 2 lb/wk)	Prevention Plus (stage 1) or stage 2 or 3 if family is motivated	TCI (stage 4), if appropriate
12–18 y	5th–84th percentile or 85th–94th percentile with no health risks	Weight velocity maintenance; after linear growth is complete, weight maintenance	Prevention counseling	Prevention counseling
	85th–94th percentile with health risks	Weight maintenance or gradual weight loss	Prevention Plus (stage 1)	SWM (stage 2)
	95th–99th percentile	Weight loss (maximum is 2 lb/wk)	Prevention Plus (stage 1)	TCI (stage 4), if appropriate
	>99th percentile	Weight loss (maximum is 2 lb/wk)	Prevention Plus (stage 1) or stage 2 or 3 if patient and family are motivated	TCI (stage 4), if appropriate

SWM indicates structured weight management; CMI, comprehensive multidisciplinary intervention; TCI, tertiary care intervention; NA, not applicable.

[a] If a child has obesity-related health risks, then the target outcome is a downward shift of the child's BMI curve. Serial weights, with the goals described here, are more easily assessed over weeks and months. In growing children, weight maintenance or even slow weight gain results in lower BMI.

Decreasing the Incidence of Child & Adolescent Obesity

- Healthy Hunger-free Kids Act of 2010

  USDA Interim Final Rule for Competitive Foods published June 28, 2013

  - Requires schools to improve the nutritional quality of foods offered for sale to students outside of the Federal school lunch and school breakfast programs.
  - The new standards apply to foods sold <u>á la carte, in school stores, snack bars, or vending machines</u>.

Decreasing the Incidence of Child & Adolescent Obesity

- Healthy Hunger-free Kids Act of 2010

  USDA Interim Final Rule for Competitive Foods published June 28, 2013

  - The principal benefit is improvement in public health.
  - The primary purpose is to ensure that foods sold in competition with school meals (competitive foods) are consistent with the most recent Dietary Guidelines
    - holds competitive foods to the same standards as other foods sold at school during the school day.

Preventing Child & Adolescent Obesity

Strive to be part of a functional “system” of health and wellness that involves your patients, your practice, and your community.

Preventing Child & Adolescent Obesity

- Promote health & wellness with whatever patient population you may have.
  - Prenatal influences
  - Breastfeeding
  - Parental/adult role modeling
- Promote health and wellness through community efforts to change policy and environment.

Preventing Child & Adolescent Obesity

Preventing Child & Adolescent Obesity

- Patient-level Interventions
  - Address the topic
  - Provide anticipatory guidance
  - Passive education
  - Connect to patients through social media
  - Connect patients to tools & resources

Preventing Child & Adolescent Obesity

- Practice-level interventions
  - Engage families with parental obesity & maternal diabetes.
  - Encourage authoritative parenting to promote healthy lifestyle habits.
  - Discourage restrictive parenting regarding child's eating habits.
  - Encourage parents, teachers and caregivers to model healthy lifestyle habits.
  - Promote physical activity in schools and child care settings by asking about activity in these settings during routine visits.

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Preventing Child & Adolescent Obesity

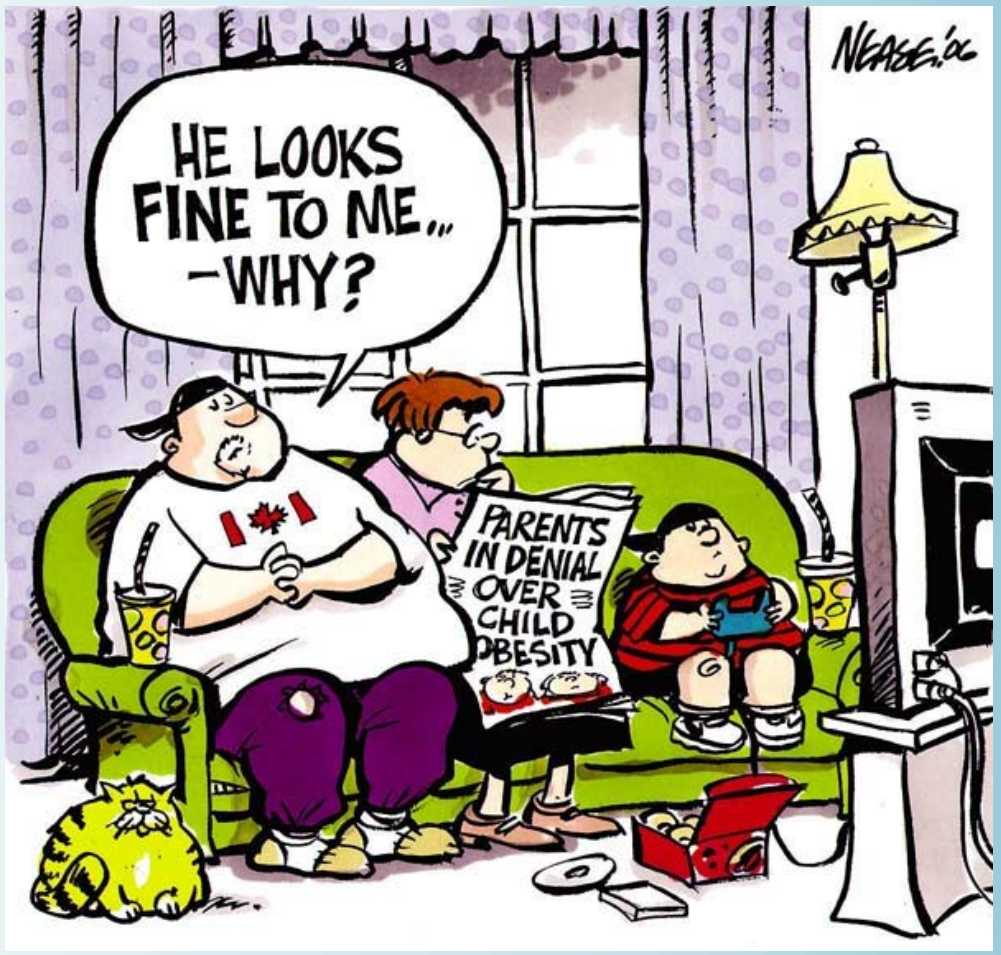
- Community-level interventions
  - Advocate for improved school environments.
  - Support local (and national) efforts to create, preserve & enhance parks as areas for physical activity.
  - Promote active healthy living in your community.

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Preventing Child & Adolescent Obesity

- Address the topic
  - Clinical practitioners are uniquely suited to address the obesity issue face-to-face.
    - Can be emotionally challenging
    - Address with all patients
  - Calculate and plot BMI at every visit.
  - Discuss implications of BMI and BMI trends.

Preventing Child & Adolescent Obesity



Preventing Child & Adolescent Obesity

- Provide anticipatory guidance
  - Physicians & Allied Health Professionals counsel "healthy weight" patients regarding:
    - Limiting sugary beverages.
    - Consuming diet rich in fruits & vegetables
    - Limiting recreational screen time.
      - Removing screens from sleeping areas.
    - Increasing frequency of home-prepared, family meals & decreasing frequency of restaurant/fast food consumption.
    - Limiting/watching portion sizes.

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Preventing Child & Adolescent Obesity

- Provide anticipatory guidance
  - Physicians & Allied Health Professionals counsel patients & families to:
    - Consume calcium-rich diet
    - Consume high-fiber diet.
    - Consume a macronutrient-balanced diet.
    - Initiate & maintain breastfeeding.
    - Participate in 60 minutes of moderate-to-vigorous activity throughout the day.
    - Limit consumption of energy-dense foods.

Barlow, SE. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007; 120; S164-S192.

Preventing Child & Adolescent Obesity

- Anticipatory guidance resources:
  - AAP HALF (Birth-5y)
    - 5-2-1-0 “Rx” forms and other tools
    - Additional web pages for school-age through young adult
  - Ounce of Prevention (Ohio Department of Health)
    - Age-specific handouts for well-child visits
  - ChooseMyPlate.gov
    - Guidance on calcium, fiber, macronutrient balance, etc.

Preventing Child & Adolescent Obesity

- **Anticipatory guidance resources:**
  - Cooking Matters
    - Resources to hold community-based programs to develop basic cooking skills.
    - www.cookingmatters.org
  - Shopping Matters
    - Resources to hold community-based supermarket tours to promote healthy, budget-friendly grocery shopping.
    - www.shoppingmatters.org

Preventing Child & Adolescent Obesity

- Anticipatory guidance resources:
  - Extension
    - Check with your local office for free or inexpensive classes or counseling for shopping, cooking, & financial/household management skills.
  - Meal Makeover Moms
    - Free family-friendly recipes & tools for meal planning, shopping, etc.
    - www.mealmakeovermoms.com

Preventing Child & Adolescent Obesity

- Passive education
  - Waiting Room
    - Video/Audio/Podcast loops
      - Don Schifrin, MD, FAAP – AAP/CBS radio podcast “A Minute For Kids”
      - OrganWise Guys videos
    - Books & Magazines
      - ChopChop Magazine (www.chopchopmag.org)
      - Waiting room books
    - Posters & Fact Sheets

Preventing Child & Adolescent Obesity

- Passive education
  - Exam Room
    - Posters & Fact Sheets
      - 5210
      - Strong 4 Life
      - AAP HALF
    - Flip chart that introduces AG topics or Key Messages
      - Can be a launching tool for MI

Preventing Child & Adolescent Obesity

- Connect to patients through social media
  - Blogs
  - YouTube
  - Facebook
  - Twitter
  - Google+
  - Pinterest
  - Instagram, Tumblr, etc.

*Start with one or two platforms and expand as needed

Preventing Child & Adolescent Obesity

- Connect to patients through social media
  - Embed or link to your practice website
    - Hootsuite
  - Invest in some education on using SM devices
    - http://www.slideshare.net/ennoconn/introduction-to-social-media-for-healthcare-professionals
    - http://healthin30.com/2011/05/3-reasons-why-social-networking-is-not-a-waste-of-time-for-health-professionals/

Preventing Child & Adolescent Obesity

- Connect to patients through social media
  - Communicate with patients in their method, using their language.
  - Think of SM tools as platforms to get generic messages OUT to your patients.
    - Lawyers do it all the time . . . .
    - www.mypinklawyer.com
      - Blog, Facebook, Twitter, YouTube
    - www.citrinlaw.com
      - Facebook, Twitter, Google+, YouTube

Preventing Child & Adolescent Obesity

- Connect patients to tools & resources
  - Apps & Websites where you can log activity &/or food intake
    - Sparkpeople.com
    - Myfitnesspal.com
    - ChooseMyPlate.gov
    - Calorieking.com

Preventing Child & Adolescent Obesity

- Connect patients to tools & resources
  - Professional Associations often have “public” sections of their website
    - American Academy of Peditricians
    - Academy of Nutrition & Dietetics
  - Vet and recommend reliable web resources
    - WeCan
    - 5210 Let’s Go (Maine)
    - www.kidshealth.org
    - www.strong4life.com

Conclusions

Conclusions

Winning the fight against obesity requires a comprehensive system that involves:

Working with patients & families to change attitudes & behaviors:

- Assess
- Educate
- Motivate

Working within communities to change cultures & environments:

- Promote
- Collaborate
- Advocate

Thank You!

John J. Lanza, MD, PhD, MPH, FAAP
Florida Department of Health
Escambia County
John_lanza@doh.state.fl.us

Physician resources available at:
www.FloridasHealth.com
Access Community: "Escambia"
Click on "Health Care Professional's Corner"
Go to FMA Obesity Presentation