U.S. Pediatrician Practices and Attitudes Concerning Obesity Assessment, Prevention, and Treatment: 2006, 2010, and 2017

Stephen Cook, MD, MPH[1]; Mary Pat Frintner, MSPH[2]; Janice L. Liebhart, MS[3];Jeanne Lindros, MPH[3]; Megan Harrison, MPH, RD[4]; Brook Belay, MD, MPH[4]; Blake Sisk, PhD[2]; Sandra G. Hassink, MD, MS[3]

[1]Pediatrics, University of Rochester; [2]Research, American Academy of Pediatrics;
[3]Institute for Healthy Childhood Weight, American Academy of Pediatrics
[4]Division of Nutrition, Physical Activity and Obesity, Centers for Disease Control and Prevention

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

PERIODIC SURVEY OF FELLOWS

American Academy of Pediatrics Institute for Healthy Childhood Weight

Background

- During the past decade, attention has focused on obesity assessment and prevention, as well as educational curricula and clinical tools to address obesity in pediatric primary care

Objective

- To examine findings from national American Academy of Pediatrics (AAP) surveys about pediatricians' practices and attitudes regarding obesity assessment, prevention, and treatment in children 2 years and older

Data and Methods

Data

- Nationally representative surveys of non-retired, U.S.-based pediatricians from the AAP's Periodic Survey
- Randomly selected samples drawn from the AAP's member database:
  - 2006: response rate=63%; n=677
  - 2010: response rate=58%; n=743
  - 2017: response rate=50%; n=704
- Analytic sample restricted to non-resident pediatricians who provide health supervision

Sample Demographics (2017)

- Gender: Female 68%; Male 32%
- Age < 50 years: 52%
- Practice setting: Solo/two-physician:18%; Group practice/HMO: 64%; Medical school/hospital/health center: 18%
- At least half of time spent in general pediatrics: 95%
- Part-time: 28%
- Work area: Suburban: 47%; Urban, not inner city: 22%; Urban, inner city: 16%; Rural: 15%

Key Variables

- Survey year: 2006, 2010 (for some variables) and 2017
- Body Mass Index (BMI): calculating and plotting
- Discussion of healthy behaviors at well-child visits
- Attitudes and practices on childhood obesity assessment and prevention

Analysis

- Bivariate analyses examined BMI assessment across 3 surveys, and discussion of healthy behaviors and practice attitudes in the 2006 and 2017 surveys
- Multivariable logistic regression examined the independent association of survey year with a) BMI assessment, b) discussions of healthy behaviors, and c) attitudes and practices related to obesity
  - Models control for age, gender, hours/week worked, practice area and setting
  - Adjusted odds ratio (AOR) and 95% confidence intervals (CI) are presented

Results: Trends in BMI Assessment

Fig. 1. Percent of pediatricians who calculate BMI at every well visit by survey year*

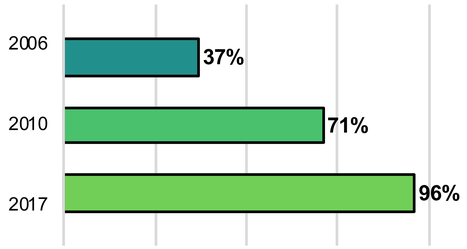
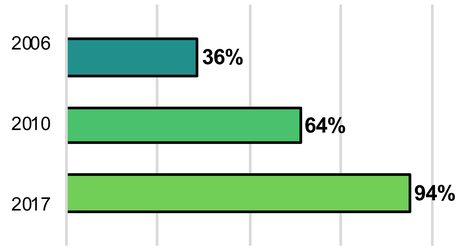


Fig. 2. Percent of pediatricians who plot BMI on growth chart at every well visit by survey year*



*Difference across survey years is statistically significant (p<0.001) in both bivariate and multivariable analysis for Fig. 1 and 2, controlling for pediatrician age, gender, hours/week worked, and practice area and setting: 1) Calculate BMI, 2017 vs 2006: AOR = 40.5 (25.2-65.09); 2017 vs 2010: AOR=8.74 (5.45-14.01) and 2) Plot BMI on growth curve, 2017 vs 2006: AOR = 31.81 (20.96-48.29); 2017 vs 2010: AOR=8.38 (5.55-12.66)
Survey question: How often do you or your staff do the following at well child visits? For children age 2 years and older: Calculate BMI; Plot BMI on an age and sex appropriate growth curve

Results: Trends in Discussion of Healthy Behaviors

Table 1. Pediatrician Practices and Attitudes towards Discussion of Behaviors and Obesity Management, 2006 vs 2017

	Unadjusted Percent		AOR (95% CI)
	2006	*2017*	*2017 vs. 2006*
Panel A: Discussion of Behaviors			
Fruits and vegetables	89	92	1.42 (0.93-2.16)
Physical Activity	87	90	1.40 (0.95-2.05)
Screen time*^	76	88	**2.40 (1.70-3.38)**
Sugar-sweetened beverages*^	65	80	**2.20 (1.66-2.92)**
Eating meals together as a family*^	51	68	**2.00 (1.56-2.57)**
Panel B: Obesity Management			
Feel very or somewhat prepared to counsel on obesity*^	89	96	**2.86 (1.71-4.80)**
Agree that families/patients are not familiar with BMI*^	72	31	**0.16 (0.13-0.21)**
Agree that weight management programs are generally not covered by health insurance*^	69	49	**0.39 (0.30-.51)**
Agree that they have support staff for screening*^	45	60	**1.87 (1.46-2.39)**
Feel their counseling on obesity management is somewhat or very effective*^	39	55	**1.95 (1.53-2.50)**
Agree that there is effective treatment for obesity*^	36	56	**2.26 (1.77-2.90)**
Agree they are paid by insurers for obesity counseling/treatment as part of a follow up visit*^	15	25	**1.87 (1.37-2.55)**

*p<.05, 2006 vs 2017 in bivariate analysis; ^p<.001 in multivariable analysis, controlling for pediatrician age, gender, hours/week worked, and practice area and setting

Multivariable Results*

BMI Assessment (Figures 1 and 2)

- Pediatricians in 2017 (vs. 2006) were significantly more likely to report calculating and plotting BMI at every well visit

Discussion of Healthy Behaviors (Table 1, Panel A)

- Pediatricians in 2017 (vs. 2006) were significantly more likely to discuss amount of screen time, sugary drinks, and family meals
- Pediatricians were just as likely in 2006 and 2017 to discuss eating fruits and vegetables daily and being physically active

Obesity Management (Table 1, Panel B)

- Pediatricians in 2017 (vs. 2006) were significantly more likely to agree that:
  - They feel prepared to counsel on obesity
  - They have support staff for screening
  - Their obesity management counseling is effective
  - There is effective obesity treatment
  - They are paid by insurers for obesity counseling as part of a follow-up visit
- Pediatricians in 2017 (vs 2006) were significantly less likely to agree that families and patients are *not* familiar with BMI and that weight management programs are generally *not* covered by insurance

**Note: Differences referred to as "significant" are p<.05 across survey years*

Conclusion

- Nationwide, practicing pediatricians since 2006 have significantly increased BMI assessments
- Providers' awareness, behaviors and practice around obesity have also improved significantly since the release of national guidelines in 2007
- Continued support on training and dissemination of practice guidelines will be needed to sustain this progress

Limitations

- This analysis is based on self-report survey data, and is generalizable to the pediatrician members of the AAP that meet the sample restrictions applied in this analysis

Acknowledgements

- This research was supported in part by the Centers for Disease Control and Prevention (CDC; Grant # U38OT000167). The research presented in this paper is that of the authors and does not reflect the official policy of the CDC
- We are grateful to all of the pediatricians who participated in the Periodic Survey