

**An Examination of Primary Care
Providers' Assessment and Plan of Care
for Children and Adolescents Who Are
Overweight or Obese**

Kevin Pinto
University of Kentucky
Fall 2018

Committee Members

- Leslie Scott, PhD, PPCNP-BC, CDE, MLDE –
Committee Chair
- Mollie Aleshire, DNP, MSN, FNP-BC, PPCNP-
BC, FNAP – Committee Member
- Morgan Chojnacki, DNP, APRN, PNP-PC –
Committee Member/Clinical Mentor

DNP Essentials

- I. Scientific Underpinnings for Practice**
- II. Organizational/Systems Leadership for Quality Improvement & Systems Thinking**
- III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice**
- IV. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care**
- V. Health Care Policy for Advocacy in Health Care**
- VI. Interprofessional Collaboration for Improving Patient & Population Health Outcomes**
- VII. Clinical Prevention & Population Health for Improving the Nation's Health**
- VIII. Advanced Nursing Practice**

Why Childhood Obesity?

- Prevalence of being overweight among children **2 to 19** years old increased from **9.2%** (between 1976-1980) to **16.2%** (between 2013 to 2014)
- Obesity rates in children from **6 to 11** years old increased from **11.3%** (between 1988 to 1994) to **19.6%** (between 2007 to 2008)
- Obesity in adolescents from **12 to 19** years old increased from **10.5%** (between 1988 to 1994) to **20.6%** (between 2013 to 2014)
- **Severe** obesity in adolescents increased from **2.6%** (between 1988 to 1994) to **9.1%** (between 2013 to 2014)

Literature Review

- Cunningham et. al. (NEJM) 2014
 - Annual incidence of obesity decreased from 5.4% in kindergarten to 1.7% between 5th & 8th grade
 - Overweight 5 YO is 4 times as likely as normal weight children to become obese (32% vs. 8%)
 - Among children who became obese between 5 and 14, half had been overweight when entering kindergarten

Purpose and Objectives

- Purpose: (1) how are we doing identifying and helping overweight/obese children (2) when we do or don't dx & treat, what is making it easier or more difficult
- Objectives:
 1. determine the frequency of diagnosis in assessment during a well-child check
 2. determine the frequency of a plan of care when a diagnosis is determined
 3. explore primary care providers' barriers and facilitators

Methods

- **First two objectives:** retrospective chart audit
- **Final objective:** voluntary, electronic survey
 - UK HealthCare's General Pediatrics Clinic at Kentucky Clinic South

Results – Table 1

Demographics

| | <i>n (%) or Mean (SD)</i> |
|-----------------------|---------------------------|
| Age | |
| 6-7 | 26 (18.6%) |
| 8-9 | 23 (16.4%) |
| 10-11 | 23 (16.4%) |
| 12-13 | 23 (16.4%) |
| 14-15 | 22 (15.7%) |
| 16-17 | 23 (16.4%) |
| Gender | |
| Male | 68 (48.6%) |
| Female | 72 (51.4%) |
| Race/ethnicity | |
| White | 52 (37.1%) |
| AA | 45 (32.1%) |
| Hispanic | 37 (26.4%) |
| Other | 6 (4.3%) |
| BMI Percentile | 95.56 (3.63) |

Results – Table 2

Assessment frequencies by overweight vs. obese

| | Overweight n (%) Subset Total <i>n</i> = 46 | Obese n (%) Subset Total <i>n</i> = 94 | Total n (%) Sample Total <i>n</i> = 140 |
|--------------------------------|---|--|--|
| Diagnosis in assessment | 8 (17.4%) | 65 (69.1%) | 73 (52.1%) |
| Plan of care in note | 6 (13%) | 63 (67%) | 69 (50.7%) |
| Referral made | 1 (2.2%) | 26 (27.7%) | 27 (19.3%) |

Results – Table 3

Assessment frequencies by age group

| | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 | 16-17 |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | n (% of group) | n (% of group) | n (% of group) | n (% of group) | n (% of group) | n (% of group) |
| Diagnosis | 11 (42.3%) | 10 (43.5%) | 13 (56.5%) | 13 (56.5%) | 12 (54.4%) | 14 (60.9%) |
| Formal plan | 10 (38.5%) | 12 (52.2%) | 11 (47.8%) | 12 (52.2%) | 12 (54.5%) | 12 (52.2%) |
| Referral | 2 (7.7%) | 4 (17.4%) | 4 (17.4%) | 5 (21.7%) | 9 (40.9%) | 3 (13%) |

Results – Table 4

Barriers to dx children as overweight or obese

| Barriers | Frequency |
|---|-------------------|
| Time available for counseling | 4 out of 5 |
| Loss of motivation from frustration by patient's response to prior efforts | 3 out of 5 |
| Lack of reimbursement | 2 out of 5 |
| Access to competent tertiary care provider for severe cases | 2 out of 5 |
| Limited training related to overweight and obesity management | 0 out of 5 |
| Concern about damaging a child's self-esteem or hurting their feelings | 0 out of 5 |
| Concern about the development of eating disorders like anorexia | 0 out of 5 |

Discussion – The Positives

1. We are doing good! 69.1% UK vs. 62.9% Pitt
2. Obesity Patient Care Plan Template
3. Clinics & Personnel
4. No differences in age groups

Discussion – Areas of Improvement

- Differences between overweight versus obese
- Barriers to helping families
- Contact hours and multi-disciplinary setting that must be off campus
- Areas outside of Lexington & Louisville

Limitations

- Audit – unable to go back to see incidence/ adiposity rebound in many charts
- Survey – low response rate – $5/38 = 13.2\%$

References

- Baidal, J. A. W., Locks, L. M., Cheng, E. R., Blake-Lamb, T. L., Perkins, M. E., & Taveras, E. M. (2016). Risk factors for childhood obesity in the first 1,000 days: a systematic review. *American journal of preventive medicine, 50*(6), 761-779.
- Cunningham, S. A., Kramer, M. R., & Narayan, K. V. (2014). Incidence of childhood obesity in the United States. *New England Journal of Medicine, 370*(5), 403-411.
- Daniels, S. R., & Hassink, S. G. (2015). The role of the pediatrician in primary prevention of obesity. *Pediatrics, 136*(1), e275-e292.
- Frederick, C. B., Snellman, K., & Putnam, R. D. (2014). Increasing socioeconomic disparities in adolescent obesity. *Proceedings of the National Academy of Sciences, 111*(4), 1338-1342
- Friis, P. A., Esmann, F. C., Theresa, S., Torben, H., Oluf, P., & Jens-Christian, H. (2016). Role of the Gut Microbiota in Childhood Obesity. *Childhood Obesity*.
- Fryar, C. D., Carroll, M. D., & Ogden, C. (2016). Prevalence of Overweight and Obesity Among Children and Adolescents Aged 2–19 Years: United States, 1963–1965 Through 2013–2014. *Health E-Stats*.
- Galuska, D. A., Will, J. C., Serdula, M. K., & Ford, E. S. (1999). Are health care professionals advising obese patients to lose weight?. *Jama, 282*(16), 1576-1578.
- Gibbs, B. G., & Forste, R. (2014). Socioeconomic status, infant feeding practices and early childhood obesity. *Pediatric obesity, 9*(2), 135-146.
- Gortmaker, S. L., Wang, Y. C., Long, M. W., Giles, C. M., Ward, Z. J., Barrett, J. L., Kenney, E., Sonnevile, K., Afzal, A., Resch, S., & Cradock, A. L. (2015). Three interventions that reduce childhood obesity are projected to save more than they cost to implement. *Health Affairs, 34*(11), 1932-1939.
- Grossman, D. C., Bibbins-Domingo, K., Curry, S. J., Barry, M. J., Davidson, K. W., Doubeni, C. A., ... & Landefeld, C. S. (2017). Screening for Obesity in Children and Adolescents: US Preventive Services Task Force Recommendation Statement. *JAMA, 317*(23), 2417-2426.
- Gurnani, M., Birken, C., & Hamilton, J. (2015). Childhood obesity: causes, consequences, and management. *Pediatric Clinics, 62*(4), 821-840
- Hales, C. M., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2017). *Prevalence of obesity among adults and youth: United States, 2015-2016*. US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

References

- Kirk, S., Woo, J. G., Brehm, B., Daniels, S. R., & Saelens, B. E. (2017). Changes in Eating Behaviors of Children with Obesity in Response to Carbohydrate-Modified and Portion-Controlled Diets. *Childhood Obesity*, 13(5), 377-383.
- Kumar, S., & Kelly, A. S. (2017, February). Review of childhood obesity: from epidemiology, etiology, and comorbidities to clinical assessment and treatment. In *Mayo Clinic Proceedings* (Vol. 92, No. 2, pp. 251-265). Elsevier.
- Ludwig, D. S. (2018). Epidemic childhood obesity: Not yet the end of the beginning. *Pediatrics*, e20174078.
- Lumeng, J. C., Taveras, E. M., Birch, L., & Yanovski, S. Z. (2015). Prevention of obesity in infancy and early childhood: a National Institutes of Health workshop. *JAMA pediatrics*, 169(5), 484-490.
- O'Brien, S. H., Holubkov, R., & Reis, E. C. (2004). Identification, evaluation, and management of obesity in an academic primary care center. *Pediatrics*, 114(2), e154-e159.
- Ogden, C. L., Carroll, M. D., Lawman, H. G., Fryar, C. D., Kruszon-Moran, D., Kit, B. K., & Flegal, K. M. (2016). Trends in obesity prevalence among children and adolescents in the United States, 1988-1994 through 2013-2014. *Jama*, 315(21), 2292-2299.
- Ogden, C. L., & Flegal, K. M. (2010). Changes in terminology for childhood overweight and obesity. National Health Statistics Report. CDC. No. 25.
- Pate, R. R., O'Neill, J. R., Brown, W. H., Pfeiffer, K. A., Dowda, M., & Addy, C. L. (2015). Prevalence of compliance with a new physical activity guideline for preschool-age children. *Childhood obesity*, 11(4), 415-420.
- Resnicow, K., McMaster, F., Bocian, A., Harris, D., Zhou, Y., Snetselaar, L., . . . & Hollinger, D. (2015). Motivational interviewing and dietary counseling for obesity in primary care: an RCT. *Pediatrics*, peds-2014.
- Skinner, A. C., Ravanbakht, S. N., Skelton, J. A., Perrin, E. M., & Armstrong, S. C. (2018). Prevalence of obesity and severe obesity in US children, 1999–2016. *Pediatrics*, e20173459.
- Tester, J. M., Phan, T. L. T., Tucker, J. M., Leung, C. W., Gillette, M. L. D., Sweeney, B. R., Kirk, S., Tindall, A., Olivo-Marston, S., & Eneli, I. U. (2018). Characteristics of children 2 to 5 years of age with severe obesity. *Pediatrics*, 141(3), e20173228.
- Wilfley, D. E., Staiano, A. E., Altman, M., Lindros, J., Lima, A., Hassink, S. G., Dietz, W.H. & Cook, S. Improving Access and Systems of Care for Evidence-Based Childhood Obesity Treatment Conference Workgroup. (2017). Improving access and systems of care for evidence-based childhood obesity treatment: Conference key findings and next steps. *Obesity*, 25(1), 16-29.

What's Next?

- Tease out factors related to difference in overweight vs obese
- Study could be done to look at younger ages
- Multidisciplinary Care Clinic Collaboration
- Appreciative Inquiry – Looking at success cases in the high BMI clinic to understand what works in future
- Telehealth for rural areas