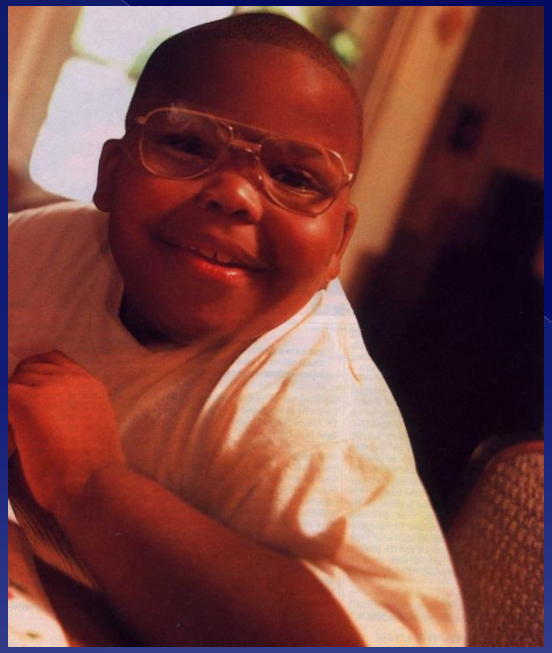
Barriers to Prevention and Treatment of Childhood Obesity in Health Professionals







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Complex Problem

- Need research based solutions
- More than just knowing what to eat
- Requires knowledge, readiness, and motivation to change eating and activity behaviors
- Team approach – parents, kids, schools, health professionals, and communities



Contributions of Genetics and Environment

- Genetics makes a contribution



- But, the environment is critical

How has the environment changed?

- 24 hour food versus 3 meals a day
- Supersize versus normal size food
  - Processed food versus whole foods
- Eating out versus eating at home
- High stress versus low stress
- Sedentary activities









Community Food Environment

- Advertising of less healthy foods
- Variation in licensure regulations among child care centers
- No safe and appealing places in many communities to play and be active
- Limited access to healthy affordable foods
- Greater availability of high-energy-dense foods and sugar sweetened beverages
- Increased portion sizes
- Lack of breastfeeding support

https://www.cdc.gov/obesity/childhood/causes.html, Accessed 5/20/2016.

Changing the Environment and Behaviors



- Environment:
  - Access to nutritious foods
  - Access to areas for physical activity
  - Advertising and marketing of foods
- Behaviors:
  - Physical activity and exercise
  - Sedentary behaviors
  - Diet
    - Availability of healthy foods
    - What, when and how much you eat
    - Effect of stress and emotions
    - Support systems for healthy eating



Addressing Childhood Obesity

Table 2. Stages of Obesity Treatment

Stage	Location of Care	Staff and Skills	Nutrition Goals
1: Prevention	Primary care office	Primary care physician or trained provider	Encouragement to consume >5 servings fruit or vegetables daily, minimize sugared beverage consumption, eat breakfast every day, eat more meals at home and as a family, avoid overly strict eating regimens
2: Structured weight management	Primary care office	Primary care physician/secondary provider; dietitian; additional training (behavioral counseling, parenting skills, nutrition)	Stage 1 plus structured meals and snacks, behavior goal targets
3: Comprehensive multidisciplinary intervention	Primary care office coordination; pediatric weight management center	Multidisciplinary team with expertise in childhood obesity; primary care–based program with counselor, dietitian, and use of outside activity program	Structured diet and physical activity to provide for negative energy balance, structured behavioral modification program incorporating monitoring and goal setting, modification of home environment
4: Tertiary care intervention	Pediatric weight management center; residential program; access to subspecialty care	Multidisciplinary team with expertise in childhood obesity, including experienced physician/secondary provider to assess comorbidities	Per established protocol: various modalities including restrictive diets, medications, or bariatric surgery

Ross MM, Kolbash S, Cohen GM, Skelton JA. Multidisciplinary Treatment of Pediatric Obesity: Nutrition Evaluation and Management. Nutr Clin Pract 2010 25: 327 – 336.

Systematic Review of Comprehensive Behavioral Family Lifestyle Interventions

- CBFLIs led to improvements in child weight outcomes
- Greater duration and intensity of treatment and greater child age were related to better weight outcomes
- No change in weight from post treatment to long term follow-up

Janicke DM et al. (2014) Systematic Review and meta-analysis of comprehensive behavioral family lifestyle interventions addressing pediatric obesity. Journal of pediatric psychology 39(8);809-825.

Attitudes, Barriers, Skills, and Training Needs Among Health Care Professionals

- Mary T. Story, Dianne R. Neumark-Stzainer, Nancy E. Sherwood, Katrina Holt, Denise Sofka, Frederick L. Trowbridge and Sarah E. Barlow. Management of child and adolescent obesity: attitudes, barriers, skills, and training needs among health care professionals. *Pediatrics* 2002;110;210-214.

Initial Research Findings

- Validated survey instrument
- Majority of health practitioners viewed child and adolescent obesity with concern and believed that intervention was important
- Barriers included lack of family involvement, patient motivation, support services, time, and reimbursement

Story et al. Management of child and adolescent obesity: attitudes, barriers, skills, and training needs among health care professionals. Pediatrics 110(1);210-214.

Initial Research Findings

- Practitioners perceived low skill levels in several areas such as assessment, behavioral management strategies, and parenting techniques, and also expressed a high interest in training in these areas
- There also was a critical need for exploring strategies to reduce barriers to prevention and treatment services

Story et al. Management of child and adolescent obesity: attitudes, barriers, skills, and training needs among health care professionals. Pediatrics 110(1);210-214.

Nurse Practitioner Obesity Prevention Practices

- Major barriers to implementing childhood obesity prevention strategies included parental attitudes, the American lifestyle, and lack of resources for both the NP and the family
- The main resources NPs used in preventing childhood obesity were dietitians, journal articles, and web sites

Larsen L et al. Childhood obesity: prevention practices of nurse practitioners. (2006) J American Academy of Nurse Practitioners 18; 70-79.

Our Research

- Utilized with permission the validated survey from Story et al. *Pediatrics* 2002;110;210-214.
- UNF Department of Nutrition & Dietetics partnered with Nemours Children's Clinic Department of Medical Education to administer the survey to all persons licensed in four distinct health professional occupations in Florida
- Physicians, nurses, dietitians and dentists

Objectives

- Survey Florida health professionals regarding attitudes, barriers, skills, and training needs related to childhood obesity prevention and treatment
- Include physicians, nurses, dietitians, and dentists
- IRB approved in 2010

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Survey Participants

- Obtained names and emails of licensed professionals from the Florida Department of Health
- 26,934 surveys were sent via email and SurveyMonkey to all groups
- The total sample was 1,727 health professionals including 402 dietitians, 723 nurses, 408 physicians, and 194 dentists
- Response rate was 6.4%

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Nutritionist/Dietitian Respondents

- 3701 on the participant list
- 2101 had an email address
- 2048 imported into SurveyMonkey
- 3 survey invitations sent
- 402 completed the survey, 23.3% of the sample

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Nurse (RN and ARNP) Respondents

- 24,996 on the participant list
- 15,883 had an email address
- 9,319 were imported into SurveyMonkey
- 3 survey invitations sent
- 723 completed the survey, 41.9% of the sample

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Physician Respondents

- 11,926 on the participant list
  - 7945 had an email address; 7,036 were imported into SurveyMonkey
  - 3 survey invitations sent
  - 408 completed it- 23.6% of the sample
    - 36% were family practice physicians
    - 12.9% were OBGYN
    - 50.9% were pediatricians
    - 0.2% were psychiatrists

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Dentist Respondents

- 12,338 on the participant list
  - 9264 had an email address; 8,531 were imported into SurveyMonkey
  - 3 survey invitations sent
  - 194 completed the survey, 11.2% of the sample

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BMI Category by Profession

- Total Group- Respondent BMI Category

BMI Category	Female 75.8%	Male 24.2%	Total
Underweight	31.3%	72.4%	40.8%
Normal	11.2%	8.6%	10.6%
Overweight	6.3%	1.8%	5.2%
Obese	51.2%	17.2%	43.3%

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Childhood Overweight Needs Treatment?

- Childhood overweight is a condition that needs treatment

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often"	81.4%[a]	82.5%[a]	82.0%[a]	91.9%[b]
N	158	592	328	372

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Adolescent Overweight Needs Treatment?

- Adolescent overweight is a condition that needs treatment

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often"*	89.2%[a,b]	86.9%[b]	90.0%[a,b]	94.8%[a]
N	173	626	360	386

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Children Outgrow Overweight?

- Overweight children will outgrow their overweight

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often"*	4.7%[a]	4.6%[a]	5.5%[a]	4.2%[a]
N	9	33	22	17

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Adolescents Outgrow Overweight?

- Overweight adolescents will outgrow their overweight

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often"*	5.7%[a]	3.1%[a]	2.0%[a]	2.7%[a]
N	11	22	8	11

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Childhood Overweight Amenable to Treatment

- Childhood overweight is more amenable to treatment than adult overweight.

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often"*	57.1%[a]	50.9%[a]	52.5%[a]	52.0%[a]
N	108	363	207	210

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Adolescent Overweight Amenable to Treatment

- Adolescent overweight is more amenable to treatment than adult overweight.

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often"*	50.5%[a]	40.8%[a,b]	42.0%[a,b]	36.9%[b]
N	94	291	166	149

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Effect on Chronic Disease Risk

- Overweight in childhood or adolescence has an effect on chronic disease in the future.

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	93.8%[a,b]	94.3%[a,b]	90.7%[b]	97.5%[a]
N	180	679	362	396

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Effect on Quality of Life

- Overweight in childhood or adolescence has an effect on quality of life in the future.

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	95.3%[a,b]	94.0%[a,b]	91.7%[b]	97.3%[a]
N	182	675	366	395

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Lack of Patient Motivation

- How often is the lack of patient motivation an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	76.3%[a]	72.9%[a]	64.1%[b]	77.7%[a]
N	142	514	250	313

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Parent Involvement

- How often is the lack of parent involvement an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	91.4%[a,b]	87.4%[a,b]	84.6%[b]	90.8%[a]
N	170	616	330	365

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Clinician Time

- How often is the lack of clinician time an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	49.5%[a,b]	45.0%[b]	48.6%[b]	59.1%[a]
N	92	317	189	237

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Reimbursement

- How often is the lack of reimbursement an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	51.6%[a,b]	48.5%[b]	69.0%[c]	57.8%[a]
N	925	343	267	231

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b and c; b is different to c, ab is indifferent to a or b ($p<0.0083$).

Clinician Knowledge

- How often is the lack of clinician knowledge an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	47.3%[a]	41.6%[a]	33.7%[b]	43.6%[a]
N	88	293	131	175

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Treatment Skills

- How often is the lack of treatment skills an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	44.9%[a]	44.4%[a]	37.8%[a]	44.2%[a]
N	83	313	146	176

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Support Services (nutrition, counseling)

- How often is the lack of support services an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	60.8%[a]	67.7%[a]	69.2%[a]	78.3%[b]
N	113	475	267	314

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Feeling of Futility or Ineffectiveness

- How often is futility an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	49.2%[a]	50.6%[a]	42.2%[a]	49.6%[a]
N	91	356	163	198

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b; ab is indifferent to a or b ($p<0.0083$).

Concern about Eating Disorders

- How often is concern about eating disorders an important barrier to effective treatment of overweight children and adolescents?

Provider Category	Dentists	Nurses	Dietitians	Physicians
Responding "Most of the time" or "Often" *	29.1%[a,b]	32.8%[b]	22.7%[a]	13.9%[c]
N	52	226	87	54

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b and c; b is different to c, ab is indifferent to a or b ($p<0.0083$).

Low Perceived Proficiency

- Addressing family conflicts/concerns (49% dietitians 34.7% physicians, 44.5% nurses, 75.2% dentists)
- Use of behavioral management strategies (22.5% dietitians, 38.1% physicians, 51.6% nurses, 60.3% dentists)
- Guidance in parenting techniques (29.3% dietitians, 28.7% physicians, 42.6% nurses, 56.7% dentists)

*Different letters indicate significant difference among the four health professional groups for the question. That is, a is different to b and c; b is different to c, ab is indifferent to a or b ($p<0.0083$).

Perceived Proficiency

- Physicians and dietitians perceived the highest proficiency in modification of patients eating practices and assessment of the degree of overweight
- Dentists perceived the lowest proficiency in all survey skills
- Nurses perceived the second lowest for all skills except for addressing family conflicts and concerns

Preferred Methods to Improve Proficiency

- Professional Guidelines (91.5%-96.3%)
- Computer programs or websites (83.0%-91.4%)
- CME courses at local meetings (80.9%-91.5%)
- Dietitians reported higher interest in all education methods compared to the other groups

Conclusions

- Not much has changed since the original study in 2003 regarding barriers, skills, and training needs of health professionals regarding prevention and treatment of childhood obesity
- Lack of parent involvement, lack of patient motivation and lack of support services are still viewed as major barriers to management of childhood obesity
- Multidisciplinary training is needed

Limitations

- Response rate to the survey was very low for dentists
- Physicians were grouped together and encompassed pediatricians, family practice, OBGYN and psychiatrists
- Survey was conducted only in Florida which may not reflect health professionals in other states

Application to Practice

- While dietitians receive the most training in obesity prevention and treatment, reimbursement for their services for weight management is sporadic and limited
- Reimbursement for dietitian services for adult diabetes and renal disease are currently covered
- Parents currently receive nutrition counseling through the WIC program and SNAP benefits

Application to Practice

- Public health initiatives such as community gardens and changes in school breakfast and lunch programs have increased access to healthy food for children since the first survey was conducted
- More work is needed to address the problems of access to unhealthy foods, food deserts, encouragement and support of breastfeeding, nutrition education for children, and lack of reimbursement for nutrition counseling

Thank you for listening!

