**Obesity Prevention Programs**

**NJAAP/PCORE Obesity Prevention QI Programs**
- Let’s Move in the Clinic (2012–2014)
- Healthy Habits, Healthy Living (2009-2010)
  - Obesity Prevention
  - Care Management
- Choosing A Healthy Life by Making Healthy Choices (2006-2009)
- Healthy Active Living (2011)
- NJ Baby Friendly Hospital Initiative (2010-2013)
  - Delivery Hospitals
  - Breastfeeding Education, Support & Training (EPIC)

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**Fostering Healthy Communities**

**Schools:**
Choosing A Healthy Life By Making Healthy Choices
- Encouraging Evaluation Results
  - Year 1: BMI (Body Mass Index) outcomes for participants showed a 5.7% decrease in children who were overweight/obese
  - Year 2: Compared to Fall 2007 data there was a 12.7% increase in children who had healthy weight; 8.4% drop in children who were overweight; and a 13.7% drop in children who were obese (% static in Fall 2007).

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**Families:**
Healthy Active Living Grant
- Bilingual Community Workshops
  - “Ask the Pediatrician”
  - Healthy Beverage Options
  - Healthy Meal Planning
  - Family Meal Time

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**Hospitals and Primary Care Practices:**

EPIC BEST for New Jersey:
**Breastfeeding Education Support, & Training**

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**EPIC BEST Outcomes**
- The 9 trainings were held for 12 practices statewide for 129 participants
- 100% of respondents said they would recommend this program to other practices
- Over 50% improvement in the following areas:
  - Identify community support partners
  - Understand the role of the lactation consultant
  - Understand how to make appropriate referrals
  - Understand how to manage slow weight gain and support exclusive breastfeeding
Let’s Move in the Clinic

Strengthening Obesity Prevention and Care Coordination Efforts within the Patient Centered Medical Home

OBJECTIVES

• Review Obesity Rates
• Examine Nutrition and Physical Activity
• Understand and use BMI
• Introduce Age Appropriate Anticipatory Guidance
• Introduce and discuss use of office-based care management tools
• Introduce advocacy efforts in the community (Be Our Voice)

Defining the Problem

• National, State and Local Statistics
• Trends/Prevalence
• Causes: Genetic, Environmental
• Medical Consequences
• Issues within Primary Care

Newark Population: 280,135 people

• Rates of Overweight/Obese Children
  – 44.2% of Newark’s children (ages 3-19) have a Body Mass Index (BMI) at or greater than the 85% percentile, the threshold definition for overweight
  – 25.2% of the children considered overweight meet the criteria for obesity (equal or greater than the 95% percentile)
When Does Obesity Begin?

Obesity Cycle

- Obese Infant
- Obese Adult
- Obese Child
- Obese Teen

What are some of the Risk Factors for Obesity?

- Race/Ethnicity
- Culture
- Income
- Availability of fruits and vegetables (fresh, frozen or canned)
- Availability of fast food options

Contributing Factors

- Genetics
- Developmental: Prenatal / In utero
- Behavioral
  - Infant feeding practices
  - Increased energy intake
  - Decreased physical activity (PA)
  - Increased sedentary behavior
- Environmental
  - Daily physical activity
  - Community sidewalks

Risk Factors

- Race/Ethnicity
- Culture
- Income
- Availability of fruits and vegetables (fresh, frozen or canned)
- Availability of fast food options

What are the consequences of Pediatric Obesity
"Pediatric Obesity is Not Just a Cosmetic Problem!"

**Short-term Consequences**
- Psychosocial (most common complication!!!)
  - Depression
  - Poor self esteem
  - Behavior and learning problems
  - Difficulty peer relations
- Insulin resistance, Type 2 Diabetes
- Dyslipidemia
- Hypertension
- Advanced bone age, earlier onset puberty
- Polycystic Ovary Syndrome (PCOS)
- Hirsuitism, acne, acanthosis nigricans
- Cholelithiasis
- Slipped Capital Femoral Epiphysis, Blount’s Disease
- Obstructive Sleep Apnea
- Pseudotumor Cerebri

**Non-alcoholic Fatty Liver Disease (NAFLD)**

**Long-term Consequences**
- Type 2 Diabetes
- Coronary Heart Disease
- Hypertension
- Cancer
- Joint Disease
- Gallbladder Disease
- Pulmonary Disease

The Price Tag of Obesity in New Jersey

**ECONOMIC IMPACT (2008)**
- New Jersey spent $2.2 billion on obesity-related health care in 2008.
- If obesity rates continue to increase, New Jersey’s obesity-related health care spending will quadruple to $9.3 billion by 2018.

Why have pediatricians and pediatric nurse practitioners been so silent about Obesity Prevention and Treatment?

**Top Reasons Why Pediatric Practitioners Don’t Engage in Obesity Prevention and Treatment**
- Lack of Patient Motivation
- Lack of Parent Involvement
- Treatment Futility
- Lack of Clinical Time
- Lack of Payment
- Lack of Support Services
- Lack of Treatment Skills

It’s Time For An Attitude Adjustment!
The 21st Century Goal for Child Health

American Academy of Pediatrics
Policy Statement, 1992

Every child deserves a medical home

Care for children in their medical home is accessible, family-centered, compassionate, continuous, comprehensive, coordinated, and culturally effective

The Medical Home- Does it Sound Familiar?

It’s a Place
The central place where primary care is provided

It’s a Process
The patient-centered process and scope of care

It’s People
The team of people delivering and coordinating care

• It’s a concept endorsed by the American Academy of Pediatrics, the American Academy of Family Physicians, the American College of Physicians, and the American Osteopathic Association

• Its benefit is to the child’s health, the family, the medical team, and the fiscal bottom line

The Medical Home Community Resource Model

Partner with Family Strengthening Community Resources

Children do better when their families are strong, and families do better when they live in communities that help them to succeed.

Annie E. Casey Foundation

Activity and Nutrition Resources in the Newark Community:

• The YWMA of Newark and Vicinity
• Newark Natural Foods
• Greater Newark Conservancy
• Newark Yoga Movement
• NJ Farm to School Network
• NJ Bike and Walk Coalition
• Action for Healthy Kids

Prevention Pays…

• At the Individual level
  – Code for your visit

• At the Population level
  – Cost savings associated with decreased morbidity
    • Asthma
    • Obstructive Sleep Apnea
    • Diabetes

Eating Patterns

Eating and Activity Patterns are Established Early
Let’s Promote Vegetables!

- Engage children in picking and growing
- Model the behavior
- Repeat introduction of new foods... ...Keep trying!
- Family Meals
- Perfect for Snacking

Cultural Food Preferences

Latino/Hispanic

Latino “Magic Foods”
- Avocados
- Chilies
- Tomato
- Beans
- Olive Oil
- Papaya
- Cilantro
- Brown Rice

Source: Latino Nutrition Coalition

The Soul Food Pyramid for Kids

1 4-6 oz. cup 5 tsp. sugar
1 Can Soda (12 oz.) 10 tsp. sugar
1 Small Soda (20 oz.) 16 tsp. sugar
1 Medium Soda (32 oz.) 26 tsp. sugar
1 Large Soda (42 oz.) 35 tsp. sugar
INACTIVITY

Limit Sedentary Time

• Screen Time includes:
  – T.V.
  – Video Games
  – iPod
  – Computers, etc.
• Increase Physical Activity
  KEEP IT MOVING!

Turn Off the TV!

• Absolutely sedentary
• Consumption of high calorie/low nutrition value foods
• Exposure to ads for energy dense/low nutrition foods
• Move TV out of the bedroom

A United States high school graduate has spent over 15,000 – 18,000 hours on TV, but only 12,000 in school

How do we prevent the problem

To Prevent the Problem...

• Begin at the beginning
Using Your Well-Child Visits To Curb Childhood Obesity

The 14 Well Child Visits
Establish Healthful Feeding and Activity Habits

How do you monitor growth

What is the Body Mass Index (BMI) And How Do We Use It

Calculating BMI

English Formula: weight (lbs)/ height (in)/ height (in) x 703
Metric Formula: weight (kg)/ height (m)/ height (m)

BMI Categories
- Underweight < 5th percentile for age
- Healthy Weight 5th to < 85th percentile for age
- Overweight 85th to < 95th percentile for age
- Obese ≥ 95th percentile for age

See CDC website: www.cdc.gov/BMI
• A screening tool
• Not diagnostic
• Proxy for adiposity
• Valid 2 – 20 years
• Adiposity varies with age and gender
• A nadir at 4 yrs.

Pediatric Weight Categories

≥ 85th percentile = overweight
≥ 95th percentile = obese

www.cdc.gov/BMI

AAP Policy on Prevention of Pediatric Overweight

1. Recognize excessive weight gain relative to linear growth.
2. Educate and empower families about lifelong nutrition and physical activity through anticipatory guidance.
3. Measure BMI percentile annually.

Improving BMI measurement

An AAP Periodic Survey fielded between April and November 2010 indicated a significant increase from 2006 in the number of pediatricians self-reporting regular use of BMI percentiles:

• 2006: 59% of respondents use BMI percentiles
• 2010: 88% of respondents use BMI percentiles
• Significant increase (p<.05) in multivariate models controlling for pediatrician characteristics

Source: AAP Periodic Survey #76

What Role Does the Primary Care Office Have in Identification/Assessment & Treatment of Overweight/Obese Patients

Universal Assessment of Obesity Risk and Steps to Prevention and Treatment

Steps to Prevention for ALL Children

- **Identification of Risk**: Calculate and plot BMI at every well child visit
- **Assessment of Risk**
  - Medical Risk: Measure Blood Pressure
    - Take a Focused Family History
    - Take a Focused Review of Systems
    - Order Appropriate Lab Tests
  - Behavior Risk: Sedentary Time
    - Eating
    - Physical Activity
- **Attitudes**: Family/patient concern and motivation

Identification For Children 2 Years and Older

**BMI Categories**
- Underweight: < 5th percentile for age
- Healthy Weight: 5th to < 85th percentile for age
- Overweight: 85th to < 95th percentile for age
- Obese: ≥ 95th percentile for age

Staged Approach to Obesity Management for BMI > 85%

<table>
<thead>
<tr>
<th>Stage</th>
<th>Technique</th>
<th>Treatment Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prevention Plus</td>
<td>Primary Care Office</td>
</tr>
<tr>
<td>2</td>
<td>Structured Weight Management</td>
<td>Primary Care Office with Support</td>
</tr>
<tr>
<td>3</td>
<td>Comprehensive, Multidisciplinary Intervention</td>
<td>Pediatric Weight Management Center</td>
</tr>
<tr>
<td>4</td>
<td>Tertiary Care Intervention</td>
<td>Tertiary Care Center</td>
</tr>
</tbody>
</table>

Stage 1: Prevention Plus

- Individual or group visits with the family
- Occur monthly
- Healthcare professional and patient/family set behavioral goals
- If no improvement after 3-6 months, patient moves to next stage

Stage 2 – Structured Weight Management

- Includes family visits with physician or health professional specifically trained in weight management
- Monthly visits can be individual or group

Care Coordination/Management in the Medical Home Stages 1 & 2

Primary Care office can provide Patient/Family with:
- Prevention Education
- Counseling Support
- Community Resources
- Referral to Pediatric Weight Management/Tertiary Care Centers
How do You Start the Conversation with the Family

Informing the Family
Use neutral terms to reduce the risk of stigmatization or harm to self-esteem
- Weight
- Excess Weight
- Body Mass Index (BMI)
- Risk for Diabetes and Heart Disease

Resources for the Office
- Waiting Area (posters, Wellview)
- Exam Rooms
  - health messages
  - handouts
  - body weight scale w/ > 300 pound capacity
  - larger patient gowns
  - blood pressure cuffs to cover 80% of patient’s arm

Staff Involvement
- Opportunity for staff member taking height/weight measurements to ask patient about:
  - Meals
  - Diet
  - Physical activity levels
  - Video game usage
  - TV watching

What Documentation is Maintained by the Primary Care Provider to Monitor Overweight/Obese Patients

Documentation
- Record BMI Percentile
- Rx for Healthy Active Living
- Quality Check Measurement Tool
Let’s Move in the Clinic

**Let’s Move! Pledge:** I support the Let’s Move! initiative and will provide counseling for optimal nutrition and physical activity at all ages. I will measure height and weight for all infants, and will calculate and discuss BMI at well child visits for all children 2 years and older. This is my move to raise a healthier generation of kids and to help solve the problem of childhood obesity within a generation.

Rx for Healthy Active Living

Resources for the Practice

What is Be Our Voice?

*Be Our Voice (BOV)* is a project of NICHQ that is supported by the Robert Wood Johnson Foundation. The project seeks to reverse the childhood obesity epidemic trend across the nation by training, supporting, and providing technical assistance to healthcare professionals in becoming advocates for policy and environmental systems change within their communities.

Let’s Move: Evaluation Results

**N=115**

Upon completion of the training:

- 25.8% increase in respondents who understand the rate of obesity among low income NJ children age 2-5
- 16.5% increase in respondents who understand appropriate age to begin tracking BMI
- 14.6% increase in respondents who agree that office visits should engage patients in process of moving towards change
- 25.7% increase in respondents who understand CDC pediatric guidelines for overweight
Let's Move: Evaluation Results

N=106

Program Feedback

• Content was useful, relevant and timely to my profession:
  – Strongly Agree: 84.9% (90)
  – Agree: 10.3% (11)
• Overall, this presentation was beneficial to me
  – Strongly Agree: 84.0% (89)
  – Agree: 10.4% (11)
• I would encourage others to attend this program
  – Strongly Agree: 84.0% (89)
  – Agree: 10.4% (11)

Changes Practice Can Implement:

• Pay more attention to BMI and how families can modify their practices
• Use of handouts/educational materials. Talking and collaborating with other institutions.
• Use the Rx for Healthy Active Living
• Team educating patient
• Engage the child in the process
• Create a database of obesity resources
• Spend more time giving anticipatory guidance

Healthy Habits, Healthy Living

Advisory Group

• *Steve Kairys, MD, MPH, FAAP – Medical Director
• *Meg Fisher, MD, FAAP – Medical Champion
• *Kemi Alli, MD, FAAP – Chief Medical Officer, HJA
• *Nwando Anyaoku, MD, MPH, FAAP – Director, Ambulatory Pediatrics, Saint Barnabas HC System
• *Lori Feldman-Winter, MD, FAAP – Dept. of Pediatrics, Cooper Health & Member AAP Section on Breastfeeding
• Jessica Stevens, MD, MPH
• Robyn D’Oria, MA, RNC, APN – Exec. Director, CNJMCHC
• Ruth Gubernick, MPH – PCORE Consultant
• Trainer

Obesity Prevention

• Review of Obesity Rates: National, State, Local
• Examine Feeding Patterns
• Examine Activity Levels
• Understand and Use BMI
• Introduce Age Appropriate Anticipatory Guidance
Healthy Habits, Healthy Living

Care Coordination/Management
• Introduce AAP Staged Approach for Obesity Management
• Discuss Stages of Behavioral Change
• Identify Patient/Parent Motivation Techniques
• Introduce Office Based Care Management Tools

Stages of Behavioral Change

The focus of the office visit is not to convince the patient to change behavior but to help the patient move along the stages of change.

Evaluation Results – Obesity Prevention (N=49)
Results suggest the Obesity Prevention training module was effective at increasing participant knowledge on the prevention of pediatric obesity.

Evaluation Results – Care Management (N=36)
Results suggest the Care Management training module was effective at increasing participant knowledge related to the care and management of pediatric obesity.

Evaluation Results
• Significant change in attitudes: Understand importance of:
  a. Anticipatory guidance: 20% increase
  b. Parent education: 30% increase
  c. Breastfeeding: 56% increase
• Chart Reviews
  – Increased use of all recommended screening tools including weight for age, weight for length, and BMI.
  – Practices incorporated the use of the Healthy Habits Healthy Living Anticipatory Guidance Forms by a rate of slightly more than 50%.
For more information

• How can we best partner with you to achieve your vision?
• What are the highest priorities within your goals for promoting wellness around healthy eating and physical activity for adolescents in NJ?

We look forward to exploring partnership opportunities...

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