Parenting at Mealtime and Playtime (PMP)
Learning Collaborative
Building Healthy Habits – Birth-5 years

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American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN
Ohio Chapter
Session Objectives

• Understand the Background and Strategies behind PMP
  – The Value of Partnerships
  – Collective Impact
  – Material Creation

• Review the Effectiveness of Implementation within Primary Care
  – Healthcare Providers
  – Families
The Approach to Weight is *Unique* in 0-5 Years

- **Target Your Effort in**
- **Prevention and Risk Assessment**

To Avoid This
Importance of Early Risk Assessment

• Food preferences, activity and sedentary levels are formed during early childhood and closely mirror that of parents.
  “Weight fate can be set by age 5 years.”
  NEJM Cunningham Jan 2014

• Physiological BMI Nader and Adiposity Rebound

• Prevention is possible and crucial during early childhood
  IOM- Report on Early Childhood 2011

• Essential to track weight/height, BMI trajectory, BP > age 3 and assess family risk coupled with preventive AG
  Expert Committee- Sept 2007
The Greatest Volume Within Primary Care

The Expert Committee on Childhood Obesity, 2007

Stage 1 - Prevent Obesity & use BMI within Primary Care

Stage 2 - Assess Patient within Primary Care with Support

Stage 3 - A program (3-6 months) for weight management
STRATEGIES
Partnerships

Partnership Development

• Ohio Department of Health
• Ohio Chapter, American Academy of Pediatrics
• Ohio Dietetic Association
• Dairy Counsel Mid-East
• Ohio WIC
• Nationwide Children’s Hospital
• The Ohio State University

Collaboration with Experts

Wide spread consistent and repetitious messaging
Creating the PMP Materials

• **Enhance Anticipatory Guidance Counseling and Risk Assessment** in the primary care setting during well child care (WCC) within the first 5 years

• **Empower Healthcare Providers with the Tools** to build the fundamental foundation of good nutrition and activity habits in their patients

• **Encourage Motivational Interviewing**

• **Support Obesity Management** within primary care
Evolution

I. Initial Project - An Ounce of Prevention
   - regional training with CME credit and free tools distributed statewide.

II. Pound of Cure - Learning Collaborative for Maintenance of Certification Credit
   Part 4 - Weight Management in Primary Care
Collective Impact with Partners

• *Common agenda* for solving pediatric obesity in Ohio:
  - Ohio Chapter, American Academy of Pediatrics
  - Ohio Department of Health
  - The Ohio State University

• *Shared measurement* – chart review risk assessment measures and family diet/activity hx collection

• *Mutually reinforcing activities* – learning session, action period calls, site visits

• *Continuous Communication* – monthly faculty calls

• *Backbone Support* – OAAP staff and PMPLC project team
How do we keep improving?

• Review feedback from previous participants

• Material Review Process
  – Focus Groups- (42 parents, 9 pediatricians, 10 RD)
  – Literacy evaluation
  – Visual engagement
Newborn–4 months

Parent Tips
- Enjoy getting to know your infant’s special personality.
- Crying is not just a sign of hunger. Comfort your infant with rocking, massage, cuddling, singing or music.
- Keep eye contact, talk, smile and use facial expressions when feeding your baby.

Feeding Advice
- Breastmilk is the best for your infant; breastfeeding is highly recommended. If you use formula, make sure it is iron-fortified.
- Your infant knows when they are hungry and when they are full. They let you know by releasing the nipple, turning their head or falling asleep. It is okay for your infant not to finish their bottle.
- Do not give your infant juice, sweetened water, soft drinks or honey.

Baby’s First Food:
Your baby is ready for solids when they can sit up with support, reach for things, open their mouth for a spoon and hold their head high (consult your pediatrician).

Activity Advice
- Actively play with your infant and limit time in swings, car seats and in front of the TV/other screens.
- Belly time is fun for your infant, but be sure to monitor them closely.

Sleep Advice
- Build a calming sleep routine with low lights, a warm bath, or reading. Avoid screens before bed.
- Do not put your infant to bed with a propped bottle.
- ALWAYS put them on their back to sleep.
- Babies at this age can and should sleep 16 to 18 hours each day.

You Noticed?
- Say can:
  - if you touch their lips, cheek or tongue, they close their head and open their mouth.
  - air thrust – if you touch their lips, they stick out their tongue.
  - and swallow – when milk hits their tongue, it gets to the back of the mouth and swallowed.
  - reflex – thick or solid foods in the back of the mouth makes the baby gag.

Feeding Your Baby
New things with lips and tongue. Lots of heart things to feel with their mouth.

Baby will start to make eye contact with you and will smile and coo in response to you.

Try This!
- Talk, hum or sing quietly.
- Gently rub their head, face, chest and back to soothe them.
- After eating, some babies like to be swaddled and held or rocked.
- Background sounds, like a fan, may help block out noises that can startle them awake.

What Comes Next?
At the end of four months, your baby has a strong neck, back and legs, can sit propped up and is good with his/her hands and fingers.

Want more info? Go to www.theounceofprevention.org
Parent Tips

- Mealtime is a perfect place to learn. Offer a variety of healthy, colorful foods; talk with them about how the food tastes, smells, feels and looks.
- Trust your preschooler’s appetite. Offer them healthy food. All children know how much they need to eat. Don’t push them to eat more.
- Never bribe, comfort or reward with food.
- Continue to have family meals (without the TV or other screens on). If they don’t eat at one meal, they will at the next.
- Sweets and sweetened drinks (fruit punch, sports drinks, or soda) should not be a part of daily routine.
- No computers or TVs in your preschooler’s bedroom.

Feeding Advice

Your main job as a parent is to be sure that meals start with a vegetable and include a wide variety of healthy foods from all the food groups. Vary the healthy foods you offer at each meal (fruits, vegetables, milk, yogurt, cheese, whole grains, beans, fish, lean meats and eggs).
- Serve your preschooler the same food as the rest of the family. Don’t fix them separate food.
- Serve small portions and let your preschooler ask for more. Continue to use child-sized plates, spoons and forks.
- Establish good habits when eating away from home; bring along fruits or vegetables.
- If your child is in day care or with relatives, make sure you know what they are eating and drinking. Stay with healthy eating plans.
- Restaurants: split meals between kids or share your meal. Order milk with the meal and don’t fill up on pre-meal snacks, such as bread, chips or crackers.
- Have healthy snacks, like vegetables, cut-up fruit, cubed cheese or yogurt.

What should my preschooler be drinking?

- Milk should be served at meals.
- Serve water first for thirst between meals.

Be Active

- Encourage daily play of one hour or more, it a part of the family routine. Try biking, skiing, dancing, jumping, or running.
- Enjoy throwing and catching balls with your preschooler. Try playing hopscotch or hide and seek.
- Limit screen time (TV, computers, video games/phones) to 30 minutes at a time and no more than 1-2 hours per day. Help your child choose what to watch.

Sleep Advice

- Enjoy a calming sleep routine with low light, warm bath, or reading together.
- No food or screens before bed.
- It is normal and best for preschoolers at this age to sleep 11-13 hours each night.

Play with a Purpose: 4 years

With lots of words, strong muscles and play skills, the 4 year old keeps finding things to explore that are new to them. Give them lots of variety for play, like hoops, different types of balls, bats, bean bags, and scarves to throw and catch.

Watching Your Child

- Your child will be curious about everything, so it’s a great time to show them how simple everyday things work. Don’t let them sit still for long.
- Just walking with your child is a chance to talk about what they see.
- Your child enjoys new things that use the five senses (sight, smell, taste, feel and sound).

Fun at Mealtime

- Meals are the best time to talk. Keep the chatter going.
- Songs are something fun to do at meals together.
- Portions need to match your child’s size and activity level.
- Ask your child to help you mix and match as many of the food groups at every meal and snack as you can (vegetables, fruits, grains, milk/dairy, proteins, like peanut butter, beans, fish, lean meat, nuts/ seeds). But your child still needs to be the one to say when their tummy is full.

Try This!

- Try short “move it and groove it” breaks together where you dance and sing.
- When your child shops with you, show them which foods are good for you and which we can only eat sometimes.

Want more info? Go to www.theounceofprevention.org
How do we make it better and inspire Behavior Change?
Nurturing Positive Mealtime and Playtime
During Age Appropriate Developmental Milestones

- Sight
- Smell
- Taste
- Texture
- Sound
- Qualities
- Fine motor skills
- Exploration
- Independence
Objectives

• **Main Targets:**
  – Parent-child dialogue and interaction
  – Physician-family dialogue
  – Aligned with age appropriate developmental milestones
  – Dietary habits and activities promoting a healthy weight

• **Linking:**
  Parent-Child engagement
during early brain and
social-emotional skill development
Never Forgetting the Crucial Role of Play

Essential skills:

- Social
- Emotional
- Cognitive
- Physical
- Creative
- Communication
Focus on Lifelong Habits....Not Weight

• Enhancing patient-provider relations through parent-child engagement

• Innovative, sustainable approach to build healthy habits
METHODS
Global Aims of the PMP Learning Collaboratives

I. To create a *series of handouts* that shape parental awareness of meal and playtime milestones and the importance of fostering a positive meal and playtime environment for birth-5 year old WCVs.

II. To improve clinician *evaluation and documentation* of obesity-related health risk at WCVs.

III. Change healthcare systems and practice

IV. To promote developmentally appropriate *healthy activity and diet behaviors* in families attending WCVs.
From March 2014 to October 2014, each practice will work to improve delivery of anticipatory guidance and identification of obesity-related risk at well child visits birth through 5-years of age to measurably improve the behavioral health of infants and young children.

Specific Aims:
1. Pediatricians will document that they assessed obesity-related health risk of at least 90% of patients attending well child visits (birth through 5 years of age)
2. At least 25% of “unhealthy” behaviors will improve after discussions with the pediatrician
3. At least 50% of patients who qualify for *A Pound of Cure*, will return for one *Pound of Cure* office visit
4. Children will be enrolled into the weight management program, *A Pound of Cure*, at a lower BMI percentile.

To achieve optimal health for and prevention of overweight in young children through early identification of risk at all well child visits.

**SMART AIM**

Provide age and developmentally appropriate preventative care and anticipatory guidance

**KEY DRIVERS**

Assess “risk” for excess weight gain

**INTERVENTIONS**

- Educate providers on proper anticipatory guidance and use of handouts
- Ensure all Ounce of Prevention materials are accessible
- Incorporate behavioral indices into office flow
- Format and embed progress note into medical record
- Distribute age-appropriate Ounce parent handouts to complement provider counseling
- Establish systems for management of patient data
- Utilize registry to monitor patient outcomes

- Assess current diet and activity habits (i.e. index answers)
- Develop office systems that can identify a child at risk for overweight
- Assessment of obesity-related health risks
  - Assess and record weight for length (<2 years of age)
  - Assess and record BMI percentile (>2 years of age)
  - Screen and interpret blood pressure (>3 years of age)
- Document weight status
- Document child’s family history

- Encourage dialogue with family
  - Gauge parental readiness to change
  - Evaluate parental perception of excess weight
  - Review obesity-related risks
  - Review growth trajectory (weight for length/ BMI percentile)
  - Discuss importance of early behavioral modification
- Provide Pound of Cure recruitment materials

- Adapt schedule to accommodate weight management visits
- Ensure all Pound of Cure materials are accessible
- Assess, discuss and document obesity-related risks at each Pound of Cure visit
  - Weight status
  - Review family history for obesity-related co-morbidities
  - Medical history
  - Cultural background
  - Social-emotional history
  - Behavioral (nutrition, activity, sedentary) history – index
- Use Pound of Cure counseling strategy at each visit
  - Provide family with handouts based on history collection and motivational interviewing
  - Provide recommendations for family lifestyle changes
  - Establish culturally appropriate, and incremental, goals with patients and families at each Pound of Cure visit
  - Praise patients in every area of success
  - Establish a referral network for patients that require additional support, or need more intense treatment

**GLOBAL AIM**

Intervene at early age for Obesity Management
PMPLC Measures

I. Pediatricians will document that they assessed obesity-related health risk of at least 90% of patients attending well child visits (birth through 5 years of age)

II. At least 25% of “unhealthy” behaviors will improve after discussions with the pediatrician

III. At least 50% of patients who qualify for A Pound of Cure, will return for one Pound of Cure office visit

IV. Determine percent of physician noted goals within chart that match with family noted goals on tablets
Adapted IHI Breakthrough Series Model

Prework:
- Form Core QI Team
- Register for OAAP QI Data Space
- Register for Learning Session
- Complete Baseline Data
- Submit Team Aim Statements & Personas
- Create Storyboard

PMP Project Team LC
Prep & Planning Phase
March 2014

Learning Session
April 10, 2014 10am-4pm

Action Period:
- Collect Monthly Data
- Participate on Monthly Conference Calls (6 total)
- Test Changes, Rapid Cycle Improvements Using PDSAs
- Participate in Site Visits
- Provide Feedback

Sustainable Best Practices Wrap Up
May 2014 – September 2014

Providers received: CME for the learning session, family incentives, a practice stipend, and MOC Part IV
Prework:
- Form Core QI Team
- Register for OAAP QI Data Space
- Register for Learning Session
- Complete Baseline Data
- Submit Team Aim Statements & Personas
- Create Storyboard

Recruitment
Primary care practices through the Ohio Chapter, AAP

Data Collection
3-month retrospective chart review
Well child visits birth-5 years
Entered into OAAP QI Data Space
Day-long, in-person training session:
• Evidenced-based training on age-appropriate & developmentally appropriate diet and activity anticipatory guidance, risk assessment, and management of overweight for birth-5 years old
• Model for Improvement
• Baseline data review
• Action Period data collection and tablet use.
The Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

The Improvement Guide
Associates in Process Improvement
**Action Period**

**Continuous Feedback**
- Monthly chart reviews
- Practice report outs
- Rapid Improvement cycles

**Practice Assistance**
- Continued education – APCs
- Site Visits
- Office Systems Change

**Action Period:**
- Collect Monthly Data
- Participate on Monthly Conference Calls (6 total)
- Test Changes, Rapid Cycle Improvements Using PDSAs
- Participate in Site Visits
- Provide Feedback

May 2014 – September 2014
Innovative Data Collection

• 4 Sets of WCV Specific “Surveys”
  – Clustered by diet and activity stages in development
  – Distributed before and after WCCs
  – Automatically uploaded to OAAP QI Data Space

• Purpose and Goals:
  – Capture diet and activity behavioral changes between WCVs due to provider AG counseling
  – Match goals provider noted with those noted by family
Practice Demographics

- 12 practices (15 physicians, 9 nurses, 1 RD, 11 office staff) recruited across the state participated in the 6-month PMPLC improvement period.

- 50,752 children, of which 39.5% were Medicaid insured.
**Goal:** 90% documentation of risk assessment measures

<table>
<thead>
<tr>
<th>Risk Assessment Measures</th>
<th>Pre %</th>
<th>Post %</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Weight and length (or BMI)</td>
<td>89.2</td>
<td>97.3</td>
<td>9.1</td>
</tr>
<tr>
<td>2. Weight status</td>
<td>34.7</td>
<td>77.9</td>
<td>124.5</td>
</tr>
<tr>
<td>3. Blood pressure category</td>
<td>58.4</td>
<td>86.0</td>
<td>47.3</td>
</tr>
<tr>
<td>4. Family history</td>
<td>66.7</td>
<td>88.1</td>
<td>32.1</td>
</tr>
<tr>
<td>5. Nutritional counseling</td>
<td>75.8</td>
<td>93.5</td>
<td>23.4</td>
</tr>
<tr>
<td>6. Physical activity counseling</td>
<td>64.6</td>
<td>92.2</td>
<td>42.7</td>
</tr>
</tbody>
</table>

• Pre % is comprised of 3-month retrospective data collection
• Post % is data from the last month of the collaborative (post-intervention)
• Chi squared analyses were performed. All measures for risk assessment reached statistical significance (p<0.00)
PMPLC documentation of risk assessment measures. Aggregate of practice data, from birth-5 year WCVs. Baseline period was Jan – March and Action (intervention) Period was late April – September.
Family Outcomes

**Goal:** At least 50% of patients who qualify for *weight management* will return for one visit

- Action period chart reviewed (n=3,427)
- Charts of 24mo+ WITH Ht. & Wt. (n=1,156)
- Patient charts with BMI %ile ≥85th (n=286 patients, 53% Male)
- 6.3% had a documented *Pound of Cure* visit (n=18)
## Family Outcomes

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th># of POC visits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 months (n = 33)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3 years (n = 30)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4 years (n = 42)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5 years (n = 47)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 months (n = 20)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3 years (n = 43)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>4 years (n = 43)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>5 years (n = 28)</td>
<td>2</td>
</tr>
</tbody>
</table>
**Goal:** At least 25% of “unhealthy” behaviors will improve after discussions with the pediatrician

- 1362 unique pre- and post-visit surveys
- Collected over 16.5 weeks
- Distributed across 4 age- and developmentally-appropriate survey clusters
- Ceiling effect of initial % healthy responses
- Developmentally appropriate changes within clusters

<table>
<thead>
<tr>
<th>PMPLC Visit</th>
<th>Pre-Visit Survey #</th>
<th>Post-Visit Survey #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Visit</td>
<td>821</td>
<td>448</td>
</tr>
<tr>
<td>Second Visit</td>
<td>54</td>
<td>29</td>
</tr>
<tr>
<td>Third Visit</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>
Family Outcomes

**Goal:** Determine percent of physician noted goals within chart that match with family noted goals on tablets

- 355 patients with chart & tablet data
- Match = physician and family noted same goal

<table>
<thead>
<tr>
<th>Cluster</th>
<th># Sets</th>
<th>Matched goals</th>
<th>Highest agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1</td>
<td>83 patients</td>
<td>2.7 goals</td>
<td>Breastfeeding</td>
</tr>
<tr>
<td>Cluster 2</td>
<td>89 patients</td>
<td>3.5 goals</td>
<td>Finger Foods</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>87 patients</td>
<td>1.7 goals</td>
<td>Offering Water</td>
</tr>
<tr>
<td>Cluster 4</td>
<td>96 patients</td>
<td>2.1 goals</td>
<td>Family mealtime</td>
</tr>
</tbody>
</table>
CONCLUSIONS
Summary

Advancing pediatric obesity prevention and management:

− Creation of 7 WCC handouts
− Significantly improved vital measurement & documentation
− Patient-centered counseling through goal setting and standardized assessment of obesity risk and diet and activity habits
− Adaptability of resources and strategies
Areas for Continued Improvement

Well Child Encounter
  – Standardization of weight management within WCC encounter
  – Length and timing
  – Utilization of tablet information
  – EMR adaptability

Parent Recognition of Excess Weight
Enhanced communication of goal setting process
Future Directions

- Scale up & spread
  - Wave Two - Completed June 3 with 8 practices

- Continuous Quality Improvement
  - Improved tablet use
  - Application development
  - Reframe Hx. Questions
  - Sustainability Studies
PMPLC was funded by the Ohio Departments of Health and CHIPRA funds to which the “views stated in the report are those of the researchers only and are not to be attributed to the study sponsors.”

Thanks to the OSU HOPES for conducting statistical analyses.
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Thank you

Questions?