Physical Activity in Child Care: Best Practices and Beyond

Why is it important to promote best practice recommendations for Physical Activity in Child Care?
Why Child Care?
1. Lots of children attend child care
   - Habits and preferences are being formed
   - Rely on adults for exposure and access
   - Love to move

Why Physical Activity?
1. Lots of children attend child care
2. Physical Activity is positively related to a child’s health

Why Physical Activity?

Physical Activity → OBESITY
Why Physical Activity?

Physical Activity → Obesity
- Attention
- Mood
- Cognitive
- Motor Skills
- Metabolic
- Social
- Cardiovascular
- Bone health
- Fitness
- Behavior

Proctor et al (2003): The Framingham Children's Study

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Why Physical Activity in Child Care?

1. Lots of children attend child care
2. Physical Activity is positively related to a child’s health
3. The amount of physical activity children get is related to what child care center they attend

1. Nearly 50% of the variation in children’s physical activity can be explained by child care facility attended (Bower et al., 2008; Dowda et al., 2004 & 2009; Fox et al., 2002; Holden et al., 2008; Pate et al., 2014)
Minutes per hour of moderate or vigorous physical activity across 50 child care centers

Why Physical Activity in Child Care?

1. Lots of children attend child care
2. Physical Activity is positively related to a child’s health
3. The amount of physical activity children get is related to what child care center they attend

Minutes of moderate or vigorous physical activity on an average day

In one month the difference between the upper and lower groups is about 8 hours!

Why is Physical Activity in Child Care Important?

1. Lots of children attend child care
2. The amount of physical activity children get is related to what child care center they attend
3. Physical Activity is positively related to a child’s health
4. Much of the variation in physical activity between centers can be attributed to modifiable factors.
Best Practice Categories

- Active and Sedentary Opportunities
- The Physical Environment
  - Fixed equipment
  - Portable equipment
  - Sedentary items
- Staff
  - Behavior
  - Training
- Education and Outreach
  - Parent and Child
- Center level Policies

Development of Best Practice Guidelines

- The NAP SACC program was developed to promote healthy weight in young children in child care settings.
- Best Practices Guidelines were developed from existing national recommendations, research literature, and expert panels.
  - National Head Start Association
  - American Academy of Pediatrics
  - National Association for Sport and Physical Education
  - National Association for the Education of Young Children
  - Early Childhood Environment Rating Scale
  - Caring for our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs
  - Bright Futures

http://pediatrics.aappublications.org/cgi/content/full/124/6/1650

Development of Best Practice Guidelines

- Most existing recommendations and standards failed to provide specific guidance.
- Supplemented by a review of the research evidence.
- Expert opinion was sought from a panel of national experts on physical activity for young children and a group of North Carolina public health and child care professionals.
Best Practice Guidelines: Opportunities

- Active and Sedentary Opportunities
  - The Physical Environment
    - Fixed equipment
    - Portable equipment
    - Sedentary items
  - Staff
    - Behavior
    - Training
  - Education and Outreach
    - Parent and Child
  - Center level physical activity policies

Best Practice: Active Opportunities

- Children should be provided with at least 120 minutes of active play time each day.
  - Includes both inside and outside time and can be structured or free play.
  - Only about 14% of centers, but about 1/3 provide 90 minutes or more each day.

![Graph showing active and sedentary time vs. minutes of active play time provided]
Best Practice: Teacher Led

- Teacher led physical activity provided to children 2 or more times each day.
  - Short bouts with children actively participating (minimal or no lines, non-elimination)
  - Several each week should have a specific motor skill objective

- We observe teacher led in 70% of centers
  - Only 40% 2+ times

- In Family Child Care Homes – 60% report at least 1 per day (Trost et al. 2009)

- Parents have suggested as a way to increase activity levels at child care (Benjamin et al. 2009)

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Best Practice: Outdoor Playtime

- Outdoor active playtime provided 2 or more times per day.
  - 88% of centers provided at least 1 outdoor period
  - About 50% provided 2 outdoor opportunities

- Children are more active outside.
Best Practice: Outdoor Playtime

Minutes of MVPA across four levels of outside play

Number of times played outside each day

0 times 1 time 2 times 3 or more

Best Practice: Activity Integration

- Moderate and vigorous physical activity integrated into learning activities

% of time spent in moderate or vigorous physical activity across three child care settings

Outside Inside Learning Centers Circle/Group Time

Best Practice: Activity Integration

- Moderate and vigorous physical activity integrated into learning activities

% of time spent in moderate or vigorous physical activity across three child care settings

Outside Inside Learning Centers Circle/Group Time
Best Practice: Sedentary Opportunities

- **Television or videos rarely or never shown**
  - Only 44% of classrooms had TV.
  - When TV present, viewing observed in 89% of classrooms
  - 65% of FCCH report turning TV on everyday (Trost et al. 2009)

- **Children not seated for periods longer than 30 minutes**
  - Only 18% of centers failed to meet this best practice
  - 47% of FCCH report children sitting 30+ minutes at least once each day (Trost et al. 2009)

Sedentary Opportunities: Seated 30+min

![Graph showing change in MVPA and SEDENTARY as times seated 30+ min increases]

Best Practice: The Physical Environment

- **Active and Sedentary Opportunities**
- **The Physical Environment**
  - Fixed equipment
  - Portable equipment
  - Sedentary items
- **Staff**
  - Behavior
  - Training
- **Education and Outreach**
  - Parent and Child
- **Center level physical activity policies**
Best Practice: The Physical Environment

- Outdoor play space includes open, grassy areas and a track/path for wheeled toys
  - Almost all have
- Indoor play space available for all activities, including running
  - Only 16% of centers had indoor play space available for running and large group games
- Variety of fixed play equipment provided to accommodate the needs of all children.
  - Should be positioned to maintain unobstructed open areas.

Best Practice: Visible Support

- Visible support for physical activity provided in classrooms and common areas through use of posters, pictures, and displayed books
  - Found in 40% of centers

Best Practice: Sedentary Equipment

- Limited display of sedentary equipment (e.g., TVs, videos, and electronic games)
  - Only 44% of classrooms had TV present
Best Practice: Portable Play Environment

- **Large variety of portable play equipment available for children to use at the same time**
  - Portable equipment was present at all centers; however, the variety and amount varied.
  - Floor equipment, such as tumbling mats, was available in nearly 50% of centers, while only a ⅓ centers provided jumping and twirling equipment.
  - Balls and other miscellaneous equipment items were available in about two-thirds of all centers.

- **Outdoor portable play equipment freely available to all children**

Best Practice: Portable Equipment

- **Associated with higher levels of physical activity**  
  (Brown et al. 2009; Dowda et al. 2009; Bower et al. 2008)

- **Increasing portable equipment has been shown to increase physical activity levels**  
  (Cardon et al. 2009; Hannon et al., 2008)

- **Change in portable play equipment = change in physical activity**

Best Practice: Staff Behavior

- **Active and Sedentary Opportunities**
- **The Physical Environment**
  - Fixed equipment
  - Portable equipment
  - Sedentary items
- **Staff**
  - Behavior
  - Training
- **Education and Outreach**
  - Parent and Child
- **Center level physical activity policies**
Best Practice: Staff behavior

- Staff should join children in active play
  - In 61% of centers staff did not join or did so modestly (<2 times)
- Staff should encourage children to be active
  - In 50% of centers we saw fewer than 2 prompts
- Active playtime should not be withheld as punishment (observed withholding in 40% of centers)
- Extra active playtime should be given as a reward (observed in only 2% of centers)

Best Practice: Staff behavior and training

- Physical activity training (not including playground safety) should be provided for staff 2 or more times per year
  - At 25% of the centers, documentation showed that at least one staff member had obtained some sort of training in physical activity.
  - Other studies have reported about 50% of child care staff have some type of physical activity training at least 1 time per year.

Best Practice: Staff Training

Minutes of moderate and vigorous physical activity across different levels of staff training

- None or rarely
- < 1 time per year
- 1 time per year
- 2 times per year or more
Best Practice Categories

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Best Practice: Education and Outreach

- Physical activity education is provided to children by using a standardized curriculum 1 or more times per week
  - Only 18% of centers had evidence of curriculum
- Physical activity education opportunities should be offered to parents 2 or more times per year
  - Only 4% say they do this.
Best Practice: Physical Activity Policies

- Written policies on physical activity should be available and followed
  - Few than 60% had evidence of written policy
  - 48% included a statement about active play
  - 56% had one about inactive time.
  - BUT...the majority of these "policies" were vague
    - "go outside daily, weather permitting."
  - None included specific details about the amount of outdoor or indoor active play time to be provided.

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Best Practice: Physical Activity Policy

- Amount of portable play equipment
- Size and type of indoor active play space
- Size and type of outdoor active play space
- Staff behavior during outdoor play time
- Amount of time staff spend working on the computer
- Giving extra outside playtime as a reward
- Amount of teacher-led active play time
- Physical activity training for staff
- Amount of time children can watch television each day
- Appropriate clothing and shoes needed for outdoor play
- Physical activity education for children

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Best Practice: Physical Activity Policy

![Bar chart showing minutes of MVPA vs. Policy Score]

- LOW
- HIGH

Policy Score

Minutes of MVPA

0 5 10 15 20 25 30 35 40 45

LOW

HIGH
Best Practice: Physical Activity Policy

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Best Practice Guidelines and Recommendations

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Conclusions

- Environment at child care is associated with physical activity
- Some cities (e.g., NYC) and states (e.g., MA, Delaware) have create policies to address specific issues (e.g., time)
- The NAP SACC Best Practices offer a starting point for discussion
  - Optimal amount of time and occasions for active play
  - How much Structured physical activity?
  - Optimal amount of Portable equipment
  - Indoor play spaces in certain geographic regions
- Occasions verses amount of time
  - Flexibility and easier to initiate throughout day
- Identify times during the day where changes may have the biggest impact
  - Circle and center time
Conclusions

- Policies for physical activity at child care settings should be developed
- Staff understand their role
  - Parents and communities
- Stakeholder groups should be formed (across organizations)
- National and regional organizations that could pool resources and offer local or regional trainings for childcare staff at low or no cost

The end...

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