

POD³ Triangle Regional Symposium
 Healthy Early Childhood Outdoor Learning Environments
 June 21st, 2013




Welcome!

POD³ Triangle Regional Symposium
 Healthy Early Childhood
 Outdoor Learning Environments
 June 21st, 2013



Supported by Blue Cross and Blue Shield of North Carolina Foundation



Natural Learning Initiative

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NLI!
 NATURAL LEARNING INITIATIVE

Creating environments for healthy human development and a healthy biosphere for generations to come.

Increasing numbers of children are being separated from the natural world. The purpose of the Natural Learning Initiative is to promote the importance of the natural environment in the daily experience of all children, through environmental design, action research, education, and dissemination of information.

News

- December 10th and 11th, 2012: Center for Healthy Design... Planning Study for Design in Urban Forests...
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Objectives

1. Raise awareness about the role of the outdoors in healthy early childhood development.
2. Offer innovative ideas and concepts to implement in childcare centers.

Activities

- Presentations
- Break out sessions
- First Environments Early Learning Center tour


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www.naturalearning.org
College of Design • NC State University

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The Benefits of Connecting Children to Nature
Nilda Cosco, PhD
Director of Programs



The problem

Children aged 2 to 5 years in North Carolina

- 16.2% were overweight
(85th to <95th percentile BMI-for-Age)
- 15.5% were obese
(≥95th percentile BMI-for-Age)

CDC, Division of Nutrition, Physical Activity, and Obesity. 2010 Pediatric Nutrition Surveillance System.

North Carolina ranks 5th worst in the US for childhood obesity
<http://www.eatsmartmovemorenc.com>

Outdoors and healthy development

- Being outdoors is the strongest correlate of physical activity (Sallis et. al, 1993)
- Diverse natural environments support attention functioning of children, gross motor development, children's health, and richer play (Boldemann, 2006; Faber Taylor, A. et al, 2001; Grahn, P. et al, 1997).
- Preschool garden strategies are effective at generating interest in fresh produce among children (Benjamin, 2011).

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Health Promotion Board, Singapore

Time outdoors reduces the prevalence of myopia (Rose et al 2008).

Vitamin G

“Green environments are an essential component of a healthy human habitat”

Frances Ming Kuo 2010

Impact of gardening on healthy eating

1. Vegetable and fruit gardening is associated with children's acceptance of diverse vegetable and fruit tastes
2. Gardening is associated with frequency of vegetable consumption (Castro et al, 2013; Cabalda et al 2011)
3. Children learn about the origin of food in preschool gardens (Kos & Jerman 2012)
4. Gardening is regarded as a positive strategy to support healthy eating (Benjamin, 2011; Story et. al. 2008)

2007 Effort by NC Outdoor Learning Environment Alliance

“Playground” redefined as “Outdoor Learning Environment” in DCDEE *Child Care Rules*

18A NCAC 09A .0207 - DEFINITION OF OUTDOOR LEARNING ENVIRONMENT
 18A .0207(a) All equipment shall be in good repair and shall be maintained in usable condition. All commercially manufactured equipment shall be assembled and certified according to procedures specified by the manufacturer.
 18A .0207(b) Equipment shall be sturdy, stable, and free of hazards that are accessible to children during normal supervised play including sharp edges, heat bonded paint, loose nails, splinters, protrusions, protruding nails and bolts on sides of frames and posts and cracks joints.
 18A .0207(c) All loose equipment shall be removed from the premises immediately or made inaccessible to the children.
 18A .0207(d) Children shall not be allowed to play on outdoor equipment that is too hot to touch.
 18A .0207(e) Any openings in equipment, steps, decks, and handrails shall be smaller than 1 1/2 inches or greater than 9 inches to prevent entrapment.
 18A .0207(f) All upright angles shall be greater than 27 degrees to prevent entrapment and strangulation.
 18A .0207(g) The outdoor play area shall be protected by a fence or other perimeter. The height shall be a minimum of four feet and the top of the fence shall be free of protrusions. The equipment anchoring protrusions on the top of fence shall not apply to fences six feet high or above. The fencing shall exclude final inches of water such as ditches, gutters, creeks, excavations, and full ponds. Gates to the fenced outdoor play area shall remain securely closed while children occupy the area.
 18A .0207(h) All stationary outdoor equipment more than 24 inches high shall be installed on a protective matting. Footings which anchor equipment shall not be exposed. Loose matting material

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Low quality OLEs

DCDEE Survey of Perceptions of Quality of OLEs,

Division of Child Development and Early Education survey of Licensing Consultants and Environmental Assessors
 N=195

- Poor: 36%
- Average: 54% → 90%
- Good: 7.5%
- Very Good: 1.2%
- Excellent: 0

Preventing Obesity by Design

Comprehensive project

- Design assistance
- Professional development
 - Webinars
 - Annual Design Institute
 - Green Desk
- Evaluation

Evolution of POD

Statewide Survey of OLEs
 Natural Learning Initiative, 2002

Preventing Obesity By Design (POD) Approach

1. **POD 1** Pilot - 3 centers
2. **POD 2** Statewide - 30 centers
 BCBSNC Foundation
 NC Partnership for Children (NCPC), 2007-2011
3. **Outdoor Learning Environments Demonstrations**
 DPI, Office of Early Learning, 2010-2011
4. **Shape NC** -19 centers
POD Outdoor Learning Environment (OLE) component
 BCBSNC Foundation - NCPC, 2010-2013
5. **Creating a Supportive Network** - Licensing Consultants and Environmental Assessors
 NC DCDEE (Division of Child Development and Early Education), 2011.
6. **POD Wake County** - 8 centers
 John Rex Endowment
 Wake County Smart Start, 2012-2015
7. **POD³ – Transferring Knowledge, Building Capacity, Extending Reach**
 BCBSNC Foundation, 2012-2015



+62% increase designated vegetable gardens
 N=26 centers



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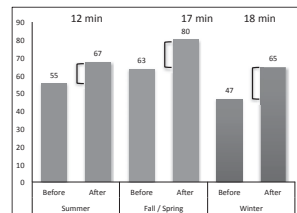
Preventing Obesity by Design POD-Wake
Planting Day



"I really like making plants"
 Very active 5 year old boy

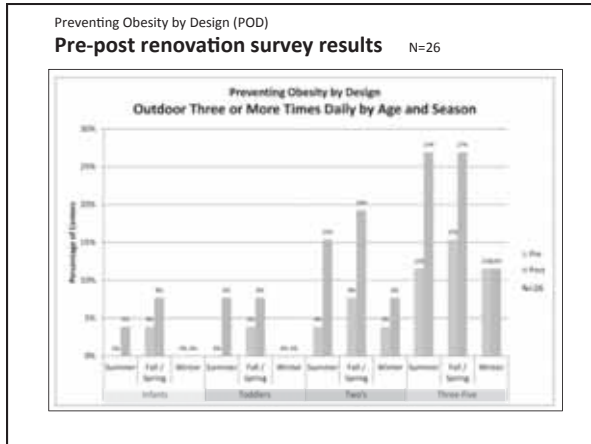


Preventing Obesity by Design (POD)
Pre-post renovation survey results N=26



More time outside in all seasons every day

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Important findings

Pathways
 Single and double loop pathways connected to the building were associated with higher levels of activity.

Important findings

Interactions

- Less custodial behaviors.
- Teacher interactions decreased the amount of children's physical activity.

- Preventing Obesity by Design POD³**
 Building capacity • Transferring Knowledge • Extending Reach
- Objectives**
- Develop education modules for adoption by higher education institutions
 - Create regional action networks of trained professionals:
 Childcare providers, early childhood educators, regulators and assessors, physical activity, culinary arts, landscape designers/contractors
 - Offer technical assistance and mini grants to establish POD3 "Regional Outdoor Labs"
 - Regional symposia and interactive design workshops
 - Disseminate technical assistance and information resources through Natural Learning Initiative's (NLI) Green Desk.
- Supported by Blue Cross and Blue Shield of North Carolina Foundation

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High quality environments promote
whole child development



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