Nemours Childhood Obesity Prevention: A decade of making a difference

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Acknowledgment

On behalf of Nemours Health and Prevention Services, we would like to thank the following for their contributions over the past ten years:

- Nemours Board of Directors
- David Bailey, MD
- Debbie Chang, MPH
- Kevin Churchwell, MD
- Mary Kate Mouser, M.Ed
- Roy Proujansky, MD
- Mariane Stefano
- Associates: past and present
Nemours – Who are we?

- Internationally recognized integrated children’s health system
- Nonprofit children’s health organization
- Operate children’s hospitals in Wilmington, DE and Orlando, FL
- Primary care and specialty clinics in Delaware, Pennsylvania, New Jersey and Florida
- Supports research, education, prevention and advocacy programs in the communities served
Nemours Health and Prevention Services

- Launched in 2004 expanding the organization’s focus on child health to include health promotion and disease prevention strategies.

- Two initial focus areas emerged from a community needs assessment of children’s health:
  - 1) healthy eating and physical activity
  - 2) emotional and behavioral wellness

- Model:
  - working with community partners to identify needs, promote policies, practices, and sustainable systems-level changes where children live, learn and play, will ultimately achieve the vision of optimal health for all children in Delaware.
The Big Picture

- In creating Nemours Health and Prevention Services (NHPS), Nemours was cutting-edge; leading a transformation that was necessary, but uncharted

- **Ten years ago…**
  - Primary prevention was not the focus in most non-governmental pediatric health systems
  - Clinical care remained at the forefront of leaders’ minds

- **Now, in 2015…**
  - The ACA has changed the healthcare landscape
  - There is national conversation about how health, and health care, interface
  - Improved population health outcomes has emerged as a critical component of ACA, and therefore a key focus for health care leaders
  - Community level primary prevention is a critical element to improving the health of populations as well as a critical component within health care systems
Key Strategies

• Established multi-sector partnerships where kids live, learn and play
  – Engaged child care, schools, primary care and other community settings

• Pursued policy, system and environmental change efforts
  – Systems changes, including capacity/infrastructure in multiple sectors
  – Licensing and regulation requirements – e.g. Child and Adult Care Food Program/child care licensing
  – Efforts to support the built environment and healthy communities

• Developed 5-2-1-Almost None healthy lifestyles social marketing campaign

• Leveraged technology
  – Used our Electronic Health Record to establish a childhood obesity quality improvement initiative to alert users when a patient’s BMI is above the healthy weight range and outline appropriate follow-up and counseling for families

• Served as an “integrator” that works intentionally and systematically across sectors to improve health and well-being
Making Strides: Systems Level Changes for Delaware’s Children

- **CHILD CARE:**
  - Piloted the learning collaborative model that improved healthy eating and physical activity practices in child care centers
  - Provided training and technical assistance to providers statewide on healthy eating

- **SCHOOLS:**
  - Trained 2,000 teachers on classroom based physical activity programming to help students reach 150 minutes per week of moderate to vigorous physical activity

- **BUILT ENVIRONMENT**
  - NHPS collaborated with the Delaware Division of Public Health to offer recommendations for healthy community design for large development proposals
    - NHPS recommendations influenced the design of 15 large development proposals and 9 municipal comprehensive plans.
Making Strides: Systems Level Changes for Delaware’s Children

• PRIMARY CARE:
  • Nemours implemented the Pediatric Developmental Screening Initiative to integrate developmental screening into well child visits in all primary care settings in Delaware.
    • 7,428 child developmental screenings were completed by Nemours in 2013. Nemours received over $98,600 in reimbursement for developmental screenings and earned a net profit of over $74,000.
  • Nemours was the first health system in the country to capture BMI data in the patient EMR.
    • This allowed for greater data gathering and evaluation for a variety of initiatives.
Nemours’ Impact in Policy

- Since 2004, NHPS has successfully advocated for policy change promoting health and wellness for Delaware’s children, including:
  - **Child care licensing regulations** for healthy eating and active living
  - Legislation to implement **FITNESSGRAM** and the Physical Education and Physical Activity Pilot in schools
  - Reimbursement for **developmental screening** in primary care
  - $20 million in funding for the **built environment** and over 500 miles of public trails and multi-use pathways
  - Investment of $23 million in the **early childhood system**

- Issued over 10 policy briefs that promoted children’s health in legislature with fact-based analysis
What we have seen…

- Over the past ten years, we have monitored progress at the state level through a surveillance tool, the Delaware Survey for Children’s Health. In 2011, this is where we were…
Weight Status of Delaware Children (Based on BMI Percentile): 2006 - 2011

- Underweight
- Normal Weight
- Overweight
- Obese

<table>
<thead>
<tr>
<th>Year</th>
<th>Underweight</th>
<th>Normal Weight</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>7.5%</td>
<td>55.9%</td>
<td>19.0%</td>
<td>17.6%</td>
</tr>
<tr>
<td>2008</td>
<td>7.7%</td>
<td>52.6%</td>
<td>22.4%</td>
<td>17.3%</td>
</tr>
<tr>
<td>2011</td>
<td>7.1%</td>
<td>52.8%</td>
<td>23.0%</td>
<td>17.1%</td>
</tr>
</tbody>
</table>
Percentage of Overweight and Obese Children in Delaware by Gender, Race, and Ethnicity, 2006-2011
Percentage of Overweight and Obese Children in Delaware by Race and Gender: 2006-2011

- **Females: White**
- **Females: African American**
- **Males: White**
- **Males: African American**
Parental Perception of Child BMI

Percentage of Parents who Consider Their Overweight Children Ages 2-17 to be 'Normal Weight' by Gender: 2006-2011

- Boys: 87.2% (2006), 80.0% (2008), 83.5% (2011)
- Girls: 67.6% (2006), 80.3% (2008), 76.2% (2011)

Percentage of Parents who Consider Their Obese Children Ages 2-17 to be 'Normal Weight' by Gender: 2006-2011

- Boys: 65.5% (2006), 52.9% (2008), 55.3% (2011)
- Girls: 65.0% (2006), 55.3% (2008), 48.4% (2011)
Determinants of Health

Quality health care 10%

Social/environmental 20%

Genetic 30%

Behavior 40%

2015 and beyond…

- There is still work to be done…
  - But we need to work differently – shifting focus from illness to wellness and sickness to health

- NHPS has evolved…
  - We need to address the whole child
  - We need to focus on communities and populations instead of just an individual
  - We need to integrate with our primary care system as partners in the development of innovative policies and practices
  - We are continuing to work with traditional partners, but looking for new partnership opportunities that extend into non-traditional areas, such as housing
Thank you