How a Childhood Obesity Systems Model May Impact State Policy and Strategy

Presenter:
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For:
Weight of the State Conference 2019
Richmond, VA
18.5% Obesity Prevalence – All Children & Adolescents

20.6% Obesity Prevalence – 12 to 19 year olds

25.8% Obesity Prevalence – Hispanic Children & Adolescents

https://www.cdc.gov/obesity/data/childhood.html
In your opinion, what have been the biggest contributors to the increase in childhood obesity in the past 20 years?
<table>
<thead>
<tr>
<th>Fast Food?</th>
<th>Sugary Beverages?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess Screen Time?</td>
<td>Lack of Outdoor Play?</td>
</tr>
<tr>
<td>Less PE &amp; Recess?</td>
<td>Excess Snacking?</td>
</tr>
<tr>
<td>Safety Concerns?</td>
<td>Computer/Smart Phones?</td>
</tr>
<tr>
<td>Temperature Regulation-Homes/Schools?</td>
<td></td>
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<tr>
<td>Too Much Sitting?</td>
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Problem Statement

• **2007 – The Problem:** nearly 1 in 3 GA adolescents are overweight or obese.

• **2008 – Explore Solutions:**
  – State legislators & their staff and experts in obesity, health economics, health policy, and systems dynamics convened to construct a systems model
  – Focus - impact of policy interventions on youth obesity (Body Mass Index for age percentile).

• **2014:** New data - Obesity systems model updated with GA BMI data and new interventions
OBJECTIVE #1

Stakeholders and their Roles in Addressing Childhood Obesity in Georgia
Overview:
Georgia Shape

Georgia’s Statewide, Collective Impact Framework to Reduce Childhood Obesity
Framework for Change: Collective Impact

Georgia Department of Public Health: “Backbone Organization”
Collective Impact Steps

- Engage Partners (120+)
  - Formal and Informal; Share Resources & Data
- Define SMART Goal(s) and Objectives
  - “What’s in it for me?”
- Develop Evaluation Design
- Implement and Share Interventions
- Collect and Report Evidence
- Share Lessons Learned
- Revise
By 2023, 69% of GA Students will be in the Healthy Fitness Zone for BMI

Baseline – 2013: 59%

How do we achieve this goal?
ENGAGED LEADERSHIP:
Members of the Governor’s Advisory Council on Childhood Obesity

Nathan Deal
Founding Chair
Former Governor, State of Georgia

John Bare
Council Co-Chair
Vice President, Arthur M. Blank Foundation

Dr. Kathleen Toomey, MD
Council Co-Chair
Commissioner, Georgia DPH

Phillip Williams, PhD
Dean, College of Public Health, University of Georgia

Missy Dugan
President and Chief Executive Officer, Boys & Girls Clubs of Metro Atlanta

Jennifer Glover, PhD
Asst Principal at White County Intermediate School, Owner Glo Crest Dairy

Evelyn Johnson, MD
Healthy Weight Task Force, Georgia Chapter, American Academy of Pediatrics

Melvin Lindsey
Senior Government Relations Director, Amerigroup Georgia

Linda Matzigkeit
Chief Administrative Officer, Children’s Healthcare of Atlanta

Teya Ryan
President and Executive Director, Georgia Public Broadcasting

Ron Shipman
Vice President. Environmental Affairs, Georgia Power

David Satcher, MD, PhD
Director, Satcher Health Leadership Institute; Director, Center of Excellence on Health Disparities, Morehouse School of Medicine

Phillip Williams, PhD
Dean, College of Public Health, University of Georgia
Georgia Shape: Target Areas

• Early Childcare Environments
• K-12 Schools
• Healthcare
  – Women Infants and Children (WIC)
  – Pediatricians
  – Birthing Hospitals
• Out of school time
Georgia Shape: Equity & Disparity Target Areas

- Adolescent Female Population
- Farm to ECE
- Low SES Communities
  - Urban & Rural
- SNAP Ed
- WIC
Georgia Shape’s 10-year goal is to ↑ the % of Georgia’s Fitnessgram-assessed student population that fall in the Healthy Fitness Zone for BMI by 1% each year.

**Objectives**
- Improve BMI & Aerobic Capacity
- Increase Populations Assessed
- Improve Breastfeeding Duration Rate
- Increase Shape Early Care Centers

**Physical Activity**

**Nutrition**

**Healthcare**

**Data & Evaluation**

**Marketing & Communications**

**SME Sub Groups**
Engaged Partners: Committee Framework

- Nutrition
- Physical Activity
- Data and Evaluation
- Communications and Marketing
- Healthcare

When: Quarterly Meetings/Conf Calls

Focus: Partner Reports on Progress & Future Efforts
Engaged Partners

• Universities
• Non-profits
• Health systems
• Private industry
• Local health districts

Partners: ≈ 129

Primary Collaboration:
• Preschool
• During and After-School
State Agency Partners

• Georgia Departments of....
  – Public Health
  – Education
  – Early Care and Learning
  – Agriculture
  – Human Services, Division of Family and Children Services
Discussion: Partners

• What unique partners do you have at the table?

• Who will you invite that’s missing from your childhood obesity coalition/task force?
OBJECTIVE #2

Systems Modeling to Inform Childhood Obesity Policy and Practice
**Background:**

Childhood Obesity Systems Model

Focus is on systems overseen by GA Legislature:

- **Education:**
  - Public Schools
  - Georgia Pre-K (Lottery $)
  - Afterschool Programs

- **Healthcare:**
  - Medicaid
  - MCH/WIC

- **Transportation:**
  - Safe Routes to Schools
• **2007**: $ from the Healthcare GA Fdn to build upon the work of the Legislative Health Policy Certificate Program (LHPCP)

• LHPCP participants chose childhood obesity as an “issue of interest”

• Team of 12 (mostly volunteers) worked for 5 months on developing the model & supporting materials

• Childhood Obesity Systems Model project provided:
  – A tool for legislators to be trained in basic systems
  – An opportunity for more rigorous discussion about an important policy issue
Background:
Childhood Obesity Systems Model

- **2014**: GHPC received grants from Woodruff Fdn & GDPH to update the model
  - Updated literature reviews for “assumptions documents” for all levers/interventions
  - Fitness assessment data collected on GA students 2011 to 2014 informs the model
  - New Levers Added: Breastfeeding, Classroom-based physical activity, Recess
What’s in the Model?

• Evidence-based Strategies (*those that change BMI*)
  • School Physical Education,
  • Classroom-based Physical Activity,
  • Afterschool Physical Activity and Nutrition,
  • Preschool Physical Activity and Nutrition
  • Competitive Foods in School Nutrition Program,
  • Medical Nutrition Therapy
  • Breastfeeding
• Safe Routes to Schools
1. Choose a *preferred policy*

2. Graph what you think will happen to Childhood Obesity Prevalence over 20 years
   - Starting = 18%
   - Ending = ?? %

3. Combine policies to come up with a “preferred set” of recommendations
Preferred “only one” policy

In your small groups...

• Write down your preferred policy

• On the graph, sketch your prediction on how the obesity % will change over the next 10 years, compared to the baseline (blue line).

• Why do you expect this change?

• What are the financial implications of this policy?

Now test it and record your observations in the first row on the following page
Who wants to “virtually” test their policy in the model?
EXAMPLE: Georgia Childhood Obesity Systems Model

Single Intervention: 50% of GA Elementary Classrooms Integrate PA

3. Practice Field: Test Policies

Instructions

Policies

Physical Education

- Keep status quo?
- Require?
- Increase quality?

After School Programs

- Keep status quo?
- Increase afterschool participation?
- Add physical activity?

Classroom activity

- Increase classroom activity?

Recess

- Keep status quo?
- Mandate recess?
- Modify recess?
- Mandate & modify recess?

Elementary

Middle

High

% of Students in Preschool Programs

- % with high quality activity & nutrition

% of schools w/o a la Carte Lunch Options

Preschool

School Nutrition

Reimbursement for nutrition counseling

Medicaid

Breastfeeding

- Increase breastfeeding prevalence

Community Based

- Develop Safe Routes to School

Performance Measures

- Obesity %
- % chg in obesity
- Obesity Cost/Child
- Annual Obesity Cost $M
- Curm Obesity Cost $M

Impacts at age 40

- Current obesity cases averted
- Cum Additional QALY’s
- Cum medical costs averted $M

Additional Assumptions

Intervention Details

Review Goals

Detailed Output
EXAMPLE: Childhood Obesity Systems Model "Power Up for 30" Interventions:
50% of GA ES Classrooms Integrate PA, 95% of ES students get mandated PE time,
Afterschool PA in 30% of students, Recess MVPA time enhanced
OBJECTIVE #3

Achieving Statewide, Population Level Change: Successes, Challenges & Lessons Learned
State Level Policy Change Informed by Model

- **2009:** House Bill 229 passed; requires annual fitness assessment in Georgia students in grades 1 through 12
  - 1.1 million students assessed annually since 2012

- **2013-Present:** Statewide childhood obesity initiative, GA Shape, provides training on integration of 30-minutes of physical activity as a key “energy balance” strategy
  - *Power Up for 30* impacts 68% - approx. 400,000 - elementary students
  - State obesity prevalence declines 1.25% since 2013

- **2018:** Legislators introduce House Bill 273 requiring daily recess in elementary and recommending unstructured breaks be available in middle schools
  - Amended by Senate, sent back to House for review
State Level Population Health Impact

- **True population health reach and impact has been achieved:**
  - 1.1 million students assessed annually for BMI and fitness
  - Professional development among 100% of WIC RD staff
  - Professional development for Healthcare Providers (3,669)
  - Power Up for 30 impacting 2/3 of all elementary schools and 7 middle schools (470,000 kids)
  - Power Up for 30 Out of School time in 275 sites (50,000 kids)
  - 37 Georgia 5 Star Baby-friendly hospitals across the state
Percent of Students in “Healthy Fitness Zone for BMI” in Georgia, 2012-2017

![Bar chart showing the percent of students in the healthy fitness zone for BMI in Georgia from 2012 to 2017 for boys and girls.]
Healthy Fitness Zone Continuum

- Proportion of MS & HS students in the HFZ increased steadily from 2012 to 2014
  - from 54.7% to 57.3% among MS students
  - from 57.0% to 59.2% among high school students

- The proportion of ES students in the HFZ declined slightly from 57.7% in 2012 to 57.2% in 2013 and substantially to 54.7% in 2014
881 schools
1,900 teachers/administrators
467,626 students
Challenges

• Keeping topic “front of mind” to state leaders & funding agencies
  – Competing priorities
• Communicating progress – state to local
• Documenting the various activities/initiatives happening in 159 counties
Challenges

• Turnover in leadership – state agencies, advisory board, key partners
• Sustained engagement – ensuring we answer “what’s in it for them?”
Summary: Lessons Learned

• Population level impact: educating leaders on the value of policy and program
• Strategic Partnerships: Long-term, collaborative partnerships are critical -- A “United Front”
• Productive Sub-Groups: Attendance/ participation in work groups builds awareness & guides future activities.
  – “Shared decision-making”
Summary: Lessons Learned

• Document, Document, & Communicate:
  – Track dollars invested ($52 million)
  – Communicate along the way the slow, steady progress toward goal
• Celebrates successes: Awards programs
• Influential leadership helps!
GA Department of Education 2020 Vision

“By the start of the 2020 school year, at least 20% of the required menu for the student meal will be comprised of Georgia Grown products.”

“Every elementary and middle school student will have access to at least 30 minutes of physical activity per day.”

Richard Woods
State Superintendent

QUESTIONS?

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"You have a rare condition called ‘good health’. Frankly, I’m not sure how to treat it.”