TRANSFORMING THE FIELD:
10 YEARS OF THE NATIONAL COLLABORATIVE ON CHILDHOOD OBESITY RESEARCH

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NATIONAL COLLABORATIVE ON CHILDHOOD OBESITY RESEARCH
Session Outline

• Introduction to NCCOR
  ▪ Steps for Building a Public Health Collaborative: An NCCOR Case Study

• Applying NCCOR’s research & evaluation tools
  ▪ Measures Registry, User Guides and Learning Modules
  ▪ Catalogue of Surveillance Systems
  ▪ Youth Compendium of Physical Activities

• NCCOR’s Research Findings
  ▪ Childhood Obesity Declines Study
  ▪ Engaging Health Care Providers and Systems in Childhood Obesity Prevention

• Questions

• Wrap up
Learning Objectives

1. Describe how NCCOR operates and the principles NCCOR applied to build a field of childhood obesity research.
2. Apply the suite of NCCOR tools to select appropriate measures of nutrition, physical activity, and environments.
3. Identify the multilevel strategies that communities implemented in the Childhood Obesity Declines Study.
4. Describe how NCCOR has worked with clinicians to prevent and intervene in childhood obesity.
The four largest funders of childhood obesity research joined forces to form NCCOR.
IDENTIFY, DESIGN, AND EVALUATE INTERVENTIONS

INCREASE AND IMPROVE SURVEILLANCE

IMPROVE CAPACITY TO CONDUCT RESEARCH AND PROGRAM EVALUATION

PROVIDE NATIONAL LEADERSHIP TO ACCELERATE IMPLEMENTATION THROUGH COMMUNICATION AND OUTREACH

WORK WITH NON-HEALTH PARTNERS TO INTEGRATE CHILDHOOD OBESITY PRIORITIES
Steps for Building a Public Health Collaborative

**NCCOR CASE STUDY**

1. **IDENTIFY**
   
   Key Knowledge Gaps

   Mobilizing collaboration efforts requires clear identification of areas that require more research attention.

   NCCOR identified measurement methods and surveillance systems related to individuals and their environments as key gaps in the field of childhood obesity research.

2. **CREATE**
   
   a Shared Identity

   Finding common ground among partner organizations helps narrow the focus of a collaborative.

   Scientific staff and senior leaders from each NCCOR partner reviewed how their childhood obesity research efforts aligned and chose to focus on the effects of environmental, policy, and systems-level factors.

3. **DEVELOP**
   
   Structures for Collaboration

   A culture of mutual respect & trust is fundamental to building effective, democratic relationships in a collaborative that draws from different disciplines and organizations.

   NCCOR’s structural model includes a neutral convener to ensure effective engagement and communication across the collaborative, with a coordinating center housed at FHI 360.

4. **IDENTIFY**
   
   Effective Leaders

   A cross-collaborative leadership team ensures consistent engagement and effort even when organizational senior leadership or areas of focus change.

   Scientific staff serve as effective leaders across NCCOR, from targeted working groups to the Steering Committee (senior-level representatives that provide overall management).

5. **FACILITATE**
   
   Continuous Knowledge Exchange

   Knowledge sharing in rapidly evolving fields requires leveraging diverse communication methods for strategic information exchange.

   NCCOR strategic communications include a website, webinars, publications, and conference presentations to engage experts across many disciplines and audiences.

6. **SUPPORT**
   
   Assessment of Progress and Feedback

   Regular assessment of collaborative activities ensures consistent alignment with mission and goals.

   Through strategic planning, assessments of partnership processes, input from external experts, and annual reviews, NCCOR continually evaluates its activities and their relevance to NCCOR’s mission and the field of childhood obesity research.
Identify key knowledge gaps

- NCCOR identified measurement methods and surveillance systems related to individuals and their environments as key gaps in the field of childhood obesity research.
- NCCOR partners also identified practical and sustainable interventions and accelerated implementation of evidence-informed practice and policy.
- NCCOR focused these efforts on children and their families and the communities and environments, such as schools and early care and education settings, where children eat and engage in physical activity, as well as the systems such as food, recreation, health care, and transportation that support those behaviors.
Create a shared identity

• Scientific staff and senior leaders from each NCCOR partner reviewed how their childhood obesity research efforts aligned and chose to focus on the effects of environmental, policy, and systems-level factors.
Develop Structures for Collaboration
Identify Effective Leaders

• Scientific staff serve as effective leaders across NCCOR, from targeted working groups to the Steering Committee (senior-level representatives that provide overall management)
Facilitate Continuous Knowledge Exchange

• NCCOR strategic communications include a website, webinars, publications, and conference presentations to engage experts across many disciplines and audiences.
Support Assessment of Progress and Feedback

- Strategic planning
- Assessments of internal partnership processes
- Input from external experts
- Annual reports and reviews
A NATIONAL COLLABORATIVE FOR BUILDING THE FIELD OF CHILDHOOD OBESITY RESEARCH
QUESTIONS?
Standard measures are needed for:

- Research and evaluation related to the causes of childhood obesity
- Interventions to prevent and treat obesity in children
- Programs and policies concerning individual and environmental determinants of childhood obesity
- Progress towards identification and implementation of evidence-based interventions, programs, and policies
Learn more about NCCOR’s TOOLS & RESOURCES

Catalogue of Surveillance Systems
Measures Registry & User Guides
Youth Compendium of Physical Activities

Have you used any of our tools or resources? Tell us how at nccor@fhi360.org
Measures Registry

• Launched in 2011, the Measures Registry is a web-based portfolio of nearly 1400 studies using more than 100 discrete measures related to diet and physical activity.
• Measures are categorized into four domains:
  - Individual Diet
  - Food Environment
  - Individual Physical Activity
  - Physical Activity Environment
Measures Registry Features

• Search and Filter capabilities by:
  ▪ Domain
  ▪ Measures Type
  ▪ Age
  ▪ Urbanicity
At a glance

• The Measures Registry highlights
  ▪ Type of measures available
  ▪ Number of Items within measurement tools
  ▪ Links to full text

• Measures are provided when available
Examples of Included Measures

• Questionnaires
• Instruments
• Diaries
• Logs
• Electronic devices
• Direct observation of people or environments
• Protocols
• Analytic techniques
Measures Registry User Guides

• The User Guides cover the four domains of the Measures Registry:
  ▪ Individual Diet
  ▪ Food Environment
  ▪ Individual Physical Activity
  ▪ Physical Activity Environment

http://www.nccor.org/mruserguides/
Measures Registry User Guides

• Provide an overview of measurement
• Describe general principles of measurement selection
• Present case studies to walk users through the process of using the Measures Registry to select appropriate measures
• Direct researchers and practitioners to additional resources
Individual Diet

- Overview of dietary behavior, which is primarily defined as dietary intake and related dietary behaviors (e.g., frequency of snacking, perceptions, and attitudes)
- Outline of the literature identifying links between diet and childhood obesity
- Concepts relevant to studying diet, including unique considerations regarding the quality of data collected in studies of children
- Methods and tools used to assess dietary intake and related dietary behaviors, including objective and self-report methods
- Principles related to psychometric properties of measures, along with random and systematic measurement error
Food Environment

- Definitions for key food environment venues
- Concepts in food environment assessment
- Methods of food environment measurement across settings
- Principles related to psychometric properties of measures
- Distinctions between single and multi-item measures, response scales, and sensitivity to change
Individual Physical Activity

• A framework to understand the unique needs of different types of studies and an introduction to the various categories of physical activity assessment options
• A description of the complexities of quantifying physical activity
• The challenges involved in assessing a multi-dimensional and dynamic behavior
• Specific considerations for measuring physical activity in children
• Considerations related to calibrating activity monitors, interpreting differences in active versus sedentary behaviors, and using new monitoring and data collection technologies and more
PA Environment

- A rationale for assessing physical activity environment and defining the key physical activity environment settings
- Description of various methods for measuring the physical activity environment
- Methods of physical activity environment measurement across settings
- Principles related to psychometric properties of measures, along with distinctions between single and multi-item measures, response scales, and sensitivity to change
Measures Registry Learning Modules

- Introduce each domain
- Highlight key topics
- Demonstrate the process of choosing a measure via a case study
- Test knowledge with quiz questions
Coming early Fall 2019

**Individual Diet**

1. Module 1: Introduction to the Individual Diet Module Series
2. Module 2: Considerations for measuring diet in the context of childhood obesity research
3. Module 3: Overview of measures of individual diet
4. Module 4: Case Study: Assessing the effects of a home-based obesity intervention on pre-school children’s dietary behaviors

**Food Environment**

1. Module 1: Introduction to the Food Environment Module Series
2. Module 2: Measuring the physical, social, and person-centered aspects of food environments
3. Module 3: Making decisions about food environment tools to use
4. Module 4: Case Study: Evaluating a home-based intervention to reduce childhood obesity

**Individual Physical Activity**

1. Module 1: Introduction to the Individual Physical Activity Module Series
2. Module 2: Processing, scoring, and interpreting physical activity data
3. Module 3: Selecting and using activity monitors
4. Module 4: Case Study: Understanding walking behaviors and barriers to active travel to school

**Physical Activity Environment**

1. Module 1: Introduction to the Physical Activity Environment Module Series
2. Module 2: GIS-based measures for the physical activity environment
3. Module 3: Audit tools for physical activity environment assessments
4. Module 4: Case Study: Improving streetscapes and parks around schools
Learning Module Preview

**MODULE 1**
This module will help you answer the following questions:
- Why is the built environment important to physical activity?
- Which settings are important for physical activity environment assessments?
- What methods can you use to assess the physical activity environment?

**MODULE 2**
This module will help you answer the following questions:
- What are the commonly used GIS-based physical environment variables?
- What GIS data sources exist?
- How can GIS-based measures be obtained without GIS software?

**MODULE 3**
This module will help you answer the following questions:
- What community settings may be measured to inform research on the physical activity environment?
- What tools are commonly used to audit physical activity environments?
- What factors are important to consider when conducting a physical environment assessment audit?

**MODULE 4**
This module will help you answer the following questions:
- What considerations should be made when selecting a physical activity environment assessment tool?
- Why is it advantageous to use an existing audit tool rather than create your own?
Considerations in selecting measures

- Research question
- Target population
- Study design
- Data collection
- Settings
- Comprehensive or focused
- Diet as an exposure, outcome, or covariate
- Parameters of interest
- Complementary measures
- Logistical considerations

Adapted from Sternfeld & Goldberg-Rosas, 2012
Case Study: Improving Streetscapes Around Parks and Schools

Case study introduction
Background

• A local bicycle and pedestrian advocacy organization is working with the city planning department to improve environments around schools to support active living

• The organization plans to apply for grant funding to support specific environmental improvements and would like the improvement targets to be identified through a community needs assessment

• Their goal is to identify specific locations and types of improvements for which to seek funding
Considerations

1. GIS-based measures may be too difficult to see a change in 2 years.
2. Self-reports require expertise in community surveys, which the organization does not have.
3. Audit tools are more specific with regard to identifying areas and attributes to target for improvement, and they can be conducted by community members.
# Measures Selection

## NCCOR Measures Registry

### Filter options

- **Search**
  - Contains "street"

- **Domain**
  - Individual Dietary Behavior (0)
  - Food Environment (3)
  - Individual Physical Activity Behavior (0)
  - Physical Activity Environment (22)

- **Measure Type**
  - GIS (0)
  - 24-hour dietary recall (0)
  - Food frequency (0)
  - Electronic monitor (0)
  - Environmental observation (22)

- **Age**
  - 2 - 5 Years (0)
  - 6 - 11 Years (1)
  - 12 - 18 Years (2)
  - Adults (2)

### Results

Showing all 22 matching measures

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>First Author</th>
<th>Year Published</th>
<th>Compare</th>
</tr>
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<td>[Measures names]</td>
<td>[Authors]</td>
<td>[Year]</td>
<td>[Columns]</td>
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**Notes:**
- [Measures names and authors are fictional entries for demonstration purposes.]
- [Columns for comparison are represented as placeholders.]
## Comparing Measures

<table>
<thead>
<tr>
<th>Domain</th>
<th>Active Neighborhood Checklist</th>
<th>Neighborhood Active Living Potential (NALP) measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity Environment</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure Type</th>
<th>Active Neighborhood Checklist</th>
<th>Neighborhood Active Living Potential (NALP) measure</th>
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<tbody>
<tr>
<td>Environmental observation</td>
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<td>Validity</td>
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<tr>
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<td>✓</td>
</tr>
<tr>
<td>Instrument</td>
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| Age                            |                             |                                                      |
| Sex                            |                             |                                                      |
| Race/Ethnicity                 |                             |                                                      |

<table>
<thead>
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<th>Language</th>
<th>Active Neighborhood Checklist</th>
<th>Neighborhood Active Living Potential (NALP) measure</th>
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<td>English</td>
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<table>
<thead>
<tr>
<th>Context</th>
<th>Active Neighborhood Checklist</th>
<th>Neighborhood Active Living Potential (NALP) measure</th>
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</thead>
<tbody>
<tr>
<td>Metro/Urban</td>
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<td>✓</td>
</tr>
</tbody>
</table>
Active Neighborhood Checklist

Domain(s)
Physical Activity Environment

Measure Type
Environmental observation

Measure Availability
Free. Access at Active Neighborhood Checklist
Download measure from activeforlife.info

Number of Items
57 Reported

Study location
Metro/Urban
MO, USA
St. Louis metropolitan area and southeastern MO, USA

Languages
English

Information about Development of Measure
Based on review of prior audit tool (reliability, relation to physical activity), phone interviews with 6 researchers and 3 practitioners

Measure last modified: 08/24/2018 4:16 PM

Physical Activity Environment Variables

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<thead>
<tr>
<th>#</th>
<th>Type of Environment/Location</th>
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<td>64</td>
<td>Total Environments/Locations</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>#</th>
<th>Scale</th>
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</thead>
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<tr>
<td>64</td>
<td>Segment</td>
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<table>
<thead>
<tr>
<th>Measure</th>
<th>objective</th>
<th>perceived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian Infrastructure</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Land Use</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Pedestrian/Traffic Safety</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Aesthetics/Beautification</td>
<td>✓</td>
<td>×</td>
</tr>
</tbody>
</table>
Other Case Examples

• Examining implications of modifications to foods offered for sale in vending machines within an institution
• Evaluating the effects of calorie-labeling within a given intuition
• Improving eating behaviors in independent neighborhood restaurants
• Determining compliance with physical activity recommendations across different grade levels
• Examining the independent and joint associations of physical activity and sedentary behavior on body mass index among middle and high school students
Catalogue of Surveillance Systems

- Launched in 2011, the Catalogue of Surveillance Systems provides one-stop access to over 100 publicly available data sets.
- Datasets include information on obesity-related:
  - Health behaviors, outcomes, and determinants
  - Policies and environmental factors
At a glance

• The Catalogue highlights
  ▪ Purpose of the data set
  ▪ Target population
  ▪ Information on data access and cost
  ▪ Links to website
Sampling & Key Variables

- Provides the following details:
  - Sample Design
  - Sample Size
  - Key demographic variables
  - Geocode variables
  - Existing linkages if available
  - Selected Publications
  - Additional Resources
CALL FOR SUBMISSIONS!

INCLUSION CRITERIA:

→ Relevant to childhood obesity research and at least one level within the social-ecological model

→ Publicly available raw data gathered in the U.S.

→ Data released in the past 10 years
Case Study

- Implementation of state laws governing school-based nutrition and physical activity
Background

• A graduate student wants to examine the association between state laws governing school-based nutrition and physical activity and practices in schools.
• They want to know whether schools in states are more likely to report specific nutrition and/or physical activity-related practices in states with laws that address or require such practices (e.g., nutrition education time, MVPA in PE)
Considerations

- Need to identify data sets with common geocodes (state identifiers) for linkage.
- Need data for state laws and school practices.
- Need to allow for “policy lag” in the data linking state laws to school practice-related data.
- Need to ensure “apples-to-apples” match in the data.
Screen shot of finding data in CSS
Data Set Information - C.L.A.S.S.
Data Set Information - School Health Profiles

Noteworthy Characteristics
- Includes information on school policies and practices related to physical activity and diet/nutrition.
- Identifies health education topics and skills taught.
- Provides data for most states, select large urban school districts, and select territories.

Geocode Variable(s)
- State.

Existing Linkages
- None noted.
Examples of Other Uses

- Linking Fatality Accident Reporting System data with American Community Survey modes of travel to work data and community walkability (using GIS data).
- Examining the impact of beverage taxation on beverage purchasing using Nielsen Homescan or Nielsen ScanTrack data.
- Linking block-group level street connectivity (walkability scale) data with National Health Interview Survey (NHIS) data on leisure time physical activity (block-group data are available through restricted use access)
The Youth Compendium of Physical Activities

- Searchable tool of 196 common activities and the estimated energy cost associated with each activity
- Provides energy costs for sedentary activities, standing, household chores, sports, walking and running
Do we need a Youth Compendium?

- Why not use accelerometers?
- Why not use the Adult Compendium?
- Is it needed?

- Cost
- Lack of Context
- Movement vs. PA
- Different
- Energy Expenditure
- PA Types
- Measure EE
- Guidelines
- PA & EE trackers
Development of the Youth Compendium

• NCCOR began working on this project in 2012 with the creating of the Youth Energy Expenditure Workgroup
• The group developed 3 goals:
  1. Develop a youth metric for children
  2. Conduct a systematic literature review of existing youth energy expenditure data
  3. Solicit unpublished data on energy expenditure in youth
NCCOR’s Youth Compendium of Physical Activities

The Youth Compendium of Physical Activities provides a list of 196 common activities in which youth participate and the estimated energy cost associated with each activity. It can be used by a wide variety of people—including researchers, health care professionals, teachers and coaches, and fitness professionals—and in a variety of ways—including research, public health policy making, education, and interventions to encourage physical activity in youth.

The Youth Compendium provides energy cost values for:

- Sedentary activities, such as lying down or watching TV
- Standing, doing household chores, and playing active video games
- Playing and participating in games and sports activities
- Walking and running

The youth MET (METₜ) values in the Youth Compendium were derived from literature reviews, data analysis, and imputation (Butte et al., 2017).

https://www.nccor.org/tools-youthcompendium/
## Search the Youth Compendium

<table>
<thead>
<tr>
<th>MET_y Code</th>
<th>Specific Activity</th>
<th>Ages 6-9</th>
<th>Ages 10-12</th>
<th>Ages 13-15</th>
<th>Ages 16-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>25100X</td>
<td>Bike Riding - Fast Speed</td>
<td></td>
<td>7.3</td>
<td>7.4</td>
<td>7.8</td>
</tr>
<tr>
<td>25120X</td>
<td>Bike Riding - Medium Speed</td>
<td>4.4</td>
<td>5.9</td>
<td>6.2</td>
<td>6.3</td>
</tr>
<tr>
<td>25140X</td>
<td>Bike Riding - Slow Speed</td>
<td>3.6</td>
<td>3.9</td>
<td>3.9</td>
<td>4.0</td>
</tr>
<tr>
<td>25160X</td>
<td>Mini-Scooter Riding</td>
<td>5.3</td>
<td>4.6</td>
<td>4.9</td>
<td>4.8</td>
</tr>
<tr>
<td>25180X</td>
<td>Scooter Riding</td>
<td>5.0</td>
<td>5.9</td>
<td>5.6</td>
<td>6.3</td>
</tr>
</tbody>
</table>
Utility of the Youth Compendium

- Public Health
- Government
- Research
- Education
- Commerce
Government Guidelines

2018 US Physical Activity Guidelines

- 60 minutes per day
- Moderate-Vigorous
- Muscle Strengthening
- Bone Strengthening
Public Health

- County-wide monitoring and tracking of nutrition and physical activity
- Establishing physical activity recommendations for an after-school program
Research

• Measurement
  ▪ Surveys
  ▪ Direct Observation
  ▪ EMA

• Interventions
  ▪ Sedentary Behavior
  ▪ Physical Activity

Promotion of Physical Activity in High School Girls
Lifestyle Education for Activity Project (LEAP) Pate et al.
Education

- Graduate research projects
- Class assignments
- K-12 Instruction
Commerce

- Activity trackers
- Energy balance websites
- Electronic activity records
MEASURES REGISTRY USER GUIDES

Four User Guides explain measurement, discuss measure selection, and present “how-to” case studies

- Provide guidance for choosing the most appropriate measure for a research question or evaluation project
- Include key considerations for measurement, selecting measures, collecting, and analyzing data
- Help move the field forward by fostering more consistent use of measures
- Case studies illustrate considerations influencing selection of the most appropriate method given the study aims
- Slide decks available for faculty and student use

Find the User Guides at www.nccor.org/mruserguides

MEASURES REGISTRY

Searchable database of articles on diet and physical activity measures relevant to childhood obesity research

- Search for existing measures and measures in development and details about how to use them
- Includes information on validity, reliability, protocols on use, settings, geographic areas, populations
- Supports manuscript development, reports, and grant applications
- Great resource for teaching and for students
- Video overview of features and how to use
- Updated regularly

Find the Registry at www.nccor.org/measures

CATALOGUE OF SURVEILLANCE SYSTEMS

One-stop access to review, sort, and compare over 100 surveillance systems relevant to childhood obesity research and the evaluation of policy and environmental interventions

- All offer publicly available data collected within the past 10 years in the U.S.
- Includes systems that contain data for evaluating policy and environmental interventions
- Makes manuscript development easier
- Great resource for teaching and for students
- Video overview of features and how to use
- Updated annually

Find the catalogue at www.nccor.org/css

YOUTH COMPENDIUM OF PHYSICAL ACTIVITIES

Searchable tool of 196 common activities and the estimated energy cost associated with each activity

- Provides energy costs for sedentary activities, standing, household chores, playing in games and sports, walking and running
- Reports energy expenditure levels in youth METs; a youth MET (METs) is a MET that has been adjusted to account for the unique physiological characteristics of children and adolescents
- For use by researchers, health care professionals, teachers and coaches, fitness professionals, and more
- Use for research, public health policy making, education, and interventions to encourage physical activity in youth
- Represents group-level estimates for energy expenditure

Find the youth compendium at www.nccor.org/youthcompendium
QUESTIONS?
NCCOR provides a platform for emerging fields and influences public health and public policy discussions.
How NCCOR Works

1. Share idea/opportunity with NCCOR
2. Interest among NCCOR partners
3. Complete Proposed Project Form
4. Steering Committee reviews project for fit
5. Determine resource(s)
6. Designate a lead person and set up a workgroup
7. Identify Coordinating Center support team
8. Plan and conduct activities
9. Communicate results and findings
10. Evaluate outcome and impact
PROJECTS

- Childhood Obesity Declines
- Engaging Health Care Providers and Systems
- Health, Behavioral Design, and the Built Environment
- Physical Activity
- Youth Energy Expenditure
Rationale for the Childhood Obesity Declines Project (COBD)

• Recent National Trends
• Patchy Signs of Progress
Objectives

1. To identify four communities with verified declines in childhood obesity rates

2. To understand what strategies were implemented, how they were implemented, and factors that may have influenced implementation

3. To understand how communities targeted their efforts toward high-risk populations
Method

• Initiated by NCCOR
• Led by NCCOR advisors and ICF
• Guided by external advisors
• Used an adapted version of the Systematic Screening and Assessment method
• Assessed childhood obesity rates
• Collected retrospective implementation data
Reported Statistically Significant Declines in Sites

<table>
<thead>
<tr>
<th>Site</th>
<th>Age or Grade</th>
<th>Reported Decline</th>
<th>Period of Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchorage, AK</td>
<td>Students in grades K, 1, and 3</td>
<td>Obesity declined from 18.0% to 17.6%, representing a relative decrease of 2.2% (p&lt;.001)</td>
<td>2003–2004 to 2010–2011 school years</td>
</tr>
<tr>
<td>Granville County, NC</td>
<td>Children 2–4 years of age</td>
<td>Overweight/obesity declined from 36% to 29.7%, representing a relative decline of 17.5% (p&lt;.01)</td>
<td>2005 to 2010</td>
</tr>
<tr>
<td>New York City, NY</td>
<td>Students in grades K-8</td>
<td>Obesity declined from 21.9% to 20.7%, representing a relative decline of 5.5% (p &lt; .001)</td>
<td>2006–2007 to 2010–2011 school years</td>
</tr>
<tr>
<td>Philadelphia, PA</td>
<td>Students in grades K-8</td>
<td>Obesity declined from 21.5% to 20.5%, representing a 4.7% relative decrease (7.7% for severe obesity) (p&lt;.001)</td>
<td>2006–2007 to 2009–2010 school years</td>
</tr>
</tbody>
</table>
## Strategies Implemented in Anchorage, AK

<table>
<thead>
<tr>
<th>Name of Strategy</th>
<th>Setting</th>
<th>Focus Area</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchorage Municipal Childcare Licensing Revisions</td>
<td>Early Care &amp; Education (ECE)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Anchorage School District: Nutrition Changes (soda ban, followed Healthy Hunger Free Kids Act (HHFKA))</td>
<td>Schools</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Anchorage School District: Health, Wellness, and Physical Education</td>
<td>Community</td>
<td>X</td>
<td></td>
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<tr>
<td></td>
<td>Health Care</td>
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<tr>
<td></td>
<td>Nutrition</td>
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<td></td>
<td>Physical Activity</td>
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<td></td>
<td>Program</td>
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<td>Policy</td>
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</tbody>
</table>
## Strategies Implemented in Granville County, NC

<table>
<thead>
<tr>
<th>Name of Strategy</th>
<th>Setting</th>
<th>Focus Area</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Nutrition (prohibiting sweetened beverages, whole milk, added sugars; increasing whole grains)</td>
<td>ECE</td>
<td>Nutrition</td>
<td>X</td>
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<tr>
<td></td>
<td>Schools</td>
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<td>X</td>
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<tr>
<td></td>
<td>Community</td>
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<tr>
<td></td>
<td>Health Care</td>
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<td>Physical Activity</td>
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<td>Program</td>
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<td></td>
<td>Policy</td>
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<td>X</td>
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<tr>
<td>Health Care Referral Program (county clinics assuring screenings and yearly check-ups)</td>
<td></td>
<td>Health Care</td>
<td>X</td>
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<td></td>
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<td>Nutrition</td>
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<td></td>
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<td>Physical Activity</td>
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<td></td>
<td></td>
<td>Program</td>
<td>X</td>
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<td></td>
<td></td>
<td>Policy</td>
<td>X</td>
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<tr>
<td>Childcare Physical Activity</td>
<td></td>
<td>Health Care</td>
<td>X</td>
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<td></td>
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<td>Nutrition</td>
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<td>Physical Activity</td>
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<td>Program</td>
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<td>Policy</td>
<td>X</td>
</tr>
</tbody>
</table>
## Strategies Implemented in New York City, NY

<table>
<thead>
<tr>
<th>Name of Strategy</th>
<th>Setting</th>
<th>Community</th>
<th>Health Care</th>
<th>Nutrition</th>
<th>Physical Activity</th>
<th>Program</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City Food Standards (comprehensive nutrition standards for all foods purchased and served by city agencies and their programs)</td>
<td>ECE</td>
<td>Schools</td>
<td>Community</td>
<td>Nutrition</td>
<td>Physical Activity</td>
<td>Program</td>
<td>Policy</td>
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<tr>
<td>School nutrition policies (including whole milk removed from public schools; introduced lower-fat, fat-free items, salad bars, healthy vending)</td>
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<tr>
<td>Move to Improve (classroom-based physical activity program)</td>
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</tbody>
</table>
## Strategies Implemented in Philadelphia, PA

<table>
<thead>
<tr>
<th>Name of Strategy</th>
<th>Setting</th>
<th>Focus Area</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal Feeding Program pilot (broadly increasing access to free and reduced-price lunch)</td>
<td>ECE, Schools</td>
<td>Nutrition</td>
<td>Program, Policy</td>
</tr>
<tr>
<td>EAT.RIGHT.NOW. Nutrition Education Program (using Supplemental Nutrition Assistance Program Education [SNAP Ed] funds)</td>
<td>ECE, Schools</td>
<td>Nutrition</td>
<td>Program</td>
</tr>
<tr>
<td>Ban on sugary drinks in schools</td>
<td>ECE, Schools</td>
<td>Nutrition</td>
<td></td>
</tr>
<tr>
<td>Comprehensive districtwide school wellness policy (switch from 2% to 1% and fat-free milk, deep fryer ban)</td>
<td>ECE, Schools</td>
<td>Nutrition</td>
<td>Program, Policy</td>
</tr>
</tbody>
</table>
Types of Strategies

• Targeted Nutrition-Related Strategies
  ▪ Changes in nutrition standards in public schools
  ▪ Changes in nutrition standards in ECE settings
  ▪ Comprehensive school wellness policies—nutrition
  ▪ Nutrition education

• Targeted Physical Activity-Related Strategies
  ▪ Comprehensive school wellness policies—physical activity
  ▪ Classroom-based physical activity
  ▪ ECE physical activity licensing requirements
  ▪ Physical activity health education
Noted Similarities

• Significant number of efforts, primarily addressing nutrition in community and school settings
• Early adopters of nutrition policies later mandated by federal policies such as Healthy, Hunger-Free Kids Act
• Reports of support for nutrition and physical activity initiatives from elected officials
• Community-wide efforts, regardless of ultimate success, raised awareness of issues related to improved diet and physical activity
• Strategies implemented across various sectors, settings, and levels were described by some respondents as a “layering effect” that, according to those respondents, improved chances for reducing obesity rates
Patterns
Commonalities
Key Findings

- **Findings support the social ecological model.** Simultaneous public health messaging and multi-layered initiatives and strategies, supported by cross-sector partnerships and high-level champions, may potentially have synergistic impact in addressing childhood obesity.

- All four communities enacted similar policies at the state and/or local level that improved the nutrition environment and increased opportunities for physical activity in both the Early Care and Education and K-12 school settings.

- Methodologically, the study demonstrates that an adapted version of the Systematic Screening Assessment method can be successfully used as a retrospective approach to assess the quality of reported childhood obesity declines and examine outcomes associated with community-based childhood obesity prevention efforts.

- **NCCOR recognizes that traditional research and evaluation methods need to be modified to address complexities** of the impact of community-based initiatives and policy implementation. Natural experiments add to the evidence base of effective strategies to reduce rates of childhood obesity.
COBD and the Healthy Communities Study (HCS)

• HCS – observational study of 130 diverse communities across the country to assess the associations between characteristics of programs and policies, and diet, physical activity, and Body Mass Index in children kindergarten through 8th grade.

• Similarities between COBD and HCS in terms of findings:
  ▪ Programs and policies are related to BMI
  ▪ Many settings, many sectors seems to make a difference
  ▪ Schools and communities play a key role!

Go to today’s 1:30pm session “Communities' Role in Childhood Obesity Prevention: The Healthy Communities Study.” to learn more about HCS
ENGAGING HEALTH CARE PROVIDERS AND SYSTEMS

NCCOR.ORG/PROJECTS/ENGAGING-HEALTHCARE-PROVIDERS-SYSTEMS
Engaging Health Care Providers and Systems Overview

• Help health care providers, systems, and federal agencies understand how research in childhood obesity prevention can be used in clinical settings

• Support health care providers, systems, public health, and communities in developing linkages by sharing best practices and evaluation strategies
Congress passed the Patient Protection and Affordable Care Act which sought to improve population health through community-based engagement.

The workgroup synthesized the workshops key learnings into a white paper, logic model, and metrics.


NCCOR facilitated a series of focus groups on primary care, tertiary care, and community-based healthy weight programs.

NCCOR held a kickoff meeting for the Learning Collaborative in April 2018, and in October 2018 launched its virtual learning platform.
Engaging with Experts

- American Heart Association
- American Academy of Pediatrics
- The Barbara Bush Children’s Hospital at Maine Medical Center
- Boston Children’s Hospital
- Brown University
- Case Western Reserve University
- Children’s HealthCare of Atlanta
- Cleveland Clinic
- Dell’s Children’s Medical Center
- Duke University
- Greater Rochester Health Foundation
- Health Care without Harm
- HealthPartners
- Healthy Weight Partnership
- Helen DeVos Children’s Hospital
- JOIN for ME
- Kaiser Permanente
- Maine Health
- Nationwide Children’s Hospital
- New York State Health Foundation
- ProActive Kids Foundation
- Redstone Global Center for Prevention and Wellness
- Stanford Children’s Hospital
- Stanford University
- University of California, San Diego
- University of Colorado School of Medicine
- University of Michigan
- University of Minnesota
- University of North Carolina, Chapel Hill
- University of Rochester Medical Center
- University of Washington
- Wholesome Wave
- YMCA
Released White Paper & Logic Model

Evaluation of Health Care-Community Engagement Efforts to Address Obesity: A Sample Logic Model

**Inputs**

- **Health Care**
  - Pediatric primary care centers, hospitals, and staff
  - Pediatric weight management programs in communities of color
  - CHW & health IT systems
  - Leadership and community benefits

- **Community/Organizations**
  - Weight management programs and other resources
  - Faith-based groups
  - Federal policy councils
  - Safe Routes to School
  - Nonprofit organizations

**Strategies & Activities**

- **IMPLANT ACTIVITY/TREE OR INTERVENTIONS**
  - **Settings**
    - Schools
    - Early care and education
    - Community-based organizations
    - Health care
  - **Target Populations**
    - Child/adolescent
    - Parent/family
    - Community
    - Provider
    - Mobile, advocate & engage across settings
    - Develop & advances partnerships
- **Policy**
  - Identify & promote adoption of key policies that support or reinforce community engagement efforts
  - Integrate health care and public health programs

**Short-term Outcomes**

- **Individual/Family**
  - Access to unhealthy options
  - Access to healthy options
  - Access to care

- **Population**
  - Participation in prevention programs
  - Improved linkage with health care system/primary care providers
  - Engagement & communication across settings
  - Awareness & understanding of healthy behaviors

**Intermediate Outcomes**

- **Provider/Health Care System**
  - Provider knowledge & skills
  - Provider & health care system readiness

**Long-term Outcomes**

- **Community/Environement**
  - Community awareness & knowledge
  - Self-sufficiency among community members
  - Prevention & availability of programs
  - Collaboration between community and health care setting

- **Policy**
  - Policies of partners supporting healthier choices among change agents
  - Adoption of policies

**Contextual Factors**

- Integration and collaboration across sectors (i.e., degree to which different community groups have worked together, including key partners and organizations and degree to which state partners have collaborated)
- Primary care and weight management, program environments (i.e., affiliations, organizational and community resources, investment-oriented leadership, and mission)
- Community resources (i.e., availability of social services, educational, and public health programs)
Determining the Need

• In May 2017, focus groups were convened to:
  ▪ Determine the utility of a collaborative learning project to evaluate childhood HWPs
  ▪ Identify the needs that such a project can address

• Two highlights emerged:
  ▪ An evaluation framework is needed for HWPs
  ▪ Community-based HWPs are ready to participate in collaborative learning projects
Developing the Collaborative Learning Project

Protected: Evaluation of Childhood Healthy Weight Programs

Session 4: Outcome Measures

The objectives for this session are:

1. Describe outcome measures relevant to HWP evaluations (e.g., acceptability, duration, fidelity).
2. Identify valid, reliable, and generalizable tools and/or methods to collect outcome measures.
3. Prioritize outcome measures to identify core measures to include across programs.

To get started, please review and respond to the discussion questions posted to the discussion board. The facilitators will host a webinar on **Monday, June 10** to review the learning objectives in more detail and go over discussion questions together.
QUESTIONS?
NCCOR connects with the field to encourage dialogue and expand our outreach
NCCOR’s webinar series connects you with experts and explores the latest childhood obesity news and research.
Sign up!
NCCOR e-Newsletter
NCCOR.org/enewsletter
Next Steps for NCCOR

NCCOR is hosting a series of workshops to determine next steps in Measurement

• **Workshop 1:** Advancing measurement of individual behaviors related to childhood obesity
• **Workshop 2:** Advancing measurement for high-risk populations and communities related to childhood obesity
• **Workshop 3:** Advancing measurement of environmental influences on behaviors related to childhood obesity
Advancing measurement for high-risk populations and communities related to childhood obesity

- **Goal:** Examine measurement needs in high-risk populations with a focus on children/families and their communities

- **Objectives:**
  - Illustrate current challenges, needs, and gaps
  - Discuss current practices to adapt and develop measures
  - Develop short- and long-term recommendations to address gaps for NCCOR, funders, researchers, and practitioners

- **Sessions:**
  - Why do we need to measure high-risk populations differently?
  - Incorporating cross-cutting social determinants of health
  - Individual and environmental diet-related measurement needs
  - Individual and environmental physical activity measurement needs
Coming Soon: User Guide for Assessing Childhood Obesity

- Helps guide selection of the most appropriate measures of adiposity in children when conducting population-level research and evaluation
- Describes key concepts and measures for assessing childhood adiposity
- Walks through specific examples of selecting adiposity measures for research and evaluation projects
- Provides additional resources relevant to adiposity measures
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