New Paths to Equity

ANNUAL REPORT 2020

NCCOR
National Collaborative on Childhood Oral Health Research
New Paths to Equity in Reducing Childhood Obesity

MORE THAN TEN YEARS AGO, the nation’s four leading childhood obesity research funders—the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), the Robert Wood Johnson Foundation (RWJF), and the U.S. Department of Agriculture (USDA)—came together to accelerate progress in the field of childhood obesity research. Together, they established the National Collaborative on Childhood Obesity Research (NCCOR). From the start, NCCOR has had a focus on health disparities and populations most affected by childhood obesity.

With this ongoing focus, in 2020 NCCOR continued to examine issues of equity and explore the role of social determinants of health in reducing childhood obesity. The Department of Health and Human Services defines health equity as “the absence of disparities or avoidable differences among socioeconomic and demographic groups or geographical areas in health status and health outcomes such as disease, disability, or mortality.” Addressing the social determinants of health is one of the primary approaches to addressing equity and health disparities between populations.

Interventions on the social determinants of health became especially critical during the global pandemic, as we saw how the novel coronavirus disproportionately impacted communities and populations that have historically faced a host of social and health inequities.

This report summarizes many of NCCOR’s equity-related activities and efforts throughout 2020, from innovative workshops to measurement tools for high-risk populations, in addition to NCCOR’s other top highlights from the year.
A CONTINUING FOCUS ON EQUITY

A path to equity for high-risk populations

Measures for children at high risk for obesity; Choosing whether to apply, adapt, or develop a measure

Children and their families at high risk for obesity are often under-represented in instrument validation studies that measure obesity and related psychosocial, behavioral, and environmental factors. Culturally and linguistically appropriate assessments are important for effective interventions and research. That’s why this year, NCCOR created a new tool especially for measurement in high-risk populations.

The new resource includes a decision tree that walks researchers and practitioners through a series of questions regarding whether to develop, adapt, or apply an instrument for obesity measures in high-risk populations. The decision tree also provides five real-world case scenarios that describe the rationale for choosing one of the three measurement approaches. Examples of case study topics include how to involve community stakeholders, how to determine whether populations are meaningfully different, and how to assess whether modifications to instruments require revalidation. Additionally, there is a resource list of guides, articles, tools, and compendia related to adapting measures.

Identification of measurement needs to prevent childhood obesity in high-risk populations

NCCOR published a new paper, “Identification of Measurement Needs to Prevent Childhood Obesity in High-Risk Populations and Environments,” in the American Journal of Preventive Medicine describing diet and physical activity measures available from NCCOR for populations at high risk for obesity. NCCOR defines “high-risk populations” as children and families residing in communities where the risk of obesity and related comorbidities may be highest. Factors related to high risk for obesity include an individual’s race and ethnicity, education, income, urbanicity, region of the country, disability status, and exposure to health hindering policies, social conditions, and environments such as economic or neighborhood disadvantage.

The new paper details updates to the Measures Registry, based on a 2013 review of the resource, in which the authors identified and characterized individual and environmental measures of diet and physical activity used among high-risk populations. Johns Hopkins University conducted the review and found that of the 351 measures added to NCCOR’s Measures Registry since 2013, 38 were used in populations at increased risk for childhood obesity. Few measures existed for certain racial/ethnic groups (American Indian/Alaska Native, Hawaiian/Pacific Islander, Asian); children with disabilities or special health care needs; and rural (vs. urban) communities. Many of the previously identified gaps in population coverage remain. The review identified the need for rigorous, community-engaged methodological research to help researchers better adapt and validate measures for high-risk populations. As a result of the findings, NCCOR created the Decision Tree.
NCCOR would like to extend a special thank you to The JPB Foundation for their support to advance measurement needs in the field of childhood obesity over the past five years with two grants totaling $2.1 million dollars.

Advancing Measurement for Childhood Obesity Workshop Series Whitepapers

In 2019 and 2020, NCCOR held a series of three workshops to define next steps in measurement needs to accelerate progress in reducing childhood obesity, including social determinants of health. The workshops were funded as part of NCCOR’s strategic alliance with The JPB Foundation. In 2020, NCCOR released the following whitepapers that resulted from this workshop series:

Advancing Measurement of Individual Behaviors Related to Childhood Obesity

This workshop brought together leading experts to (1) explore next steps for measurement science relevant to emerging areas for diet and physical activity in children, particularly from birth to twelve years of age and (2) examine measurement science issues in two other topics of new relevance to childhood obesity—sedentary behavior and sleep.

Priorities include:

• To develop measurement methods for children younger than age 6 years
• To define terms and core indicators or domains that can be measured
• To examine the importance of family, social, and environmental contexts and how they evolve with age.

Advancing Measurement for High-Risk Populations and Communities Related to Childhood Obesity

Leading research and practice experts were convened to (1) illustrate current challenges, needs, and gaps in measurement for high-risk populations and (2) discuss current practices used to adapt existing measures and develop new measures for high-risk populations.

Priorities include:

• To develop new, and adapt existing, measures for high-risk groups
• To develop methods and guidance to accommodate the need to balance standardization against tailoring
• To support efforts to ensure that measures and their implementation reflect cultural competence and cultural humility
• To develop ways to share current work to improve learning and leverage existing research and implementation practices.

Advancing Measurement of Environmental and Policy Influences on Childhood Obesity

Leading research and practice experts met to (1) illustrate current challenges, needs, and gaps in measurement of environment and policy related to diet and physical activity and (2) discuss current practices used to adapt existing measures and develop new measures of environment and policy.

Priorities include:

• To identify measures, methods, and approaches for collecting data where little information exists
• To create new approaches for optimizing measurement, incorporating measures into existing sources of data and disseminating them widely
• To work across disciplines and sectors to synthesize measurement approaches that have been well-developed in other sectors and identify measures from other sectors that are appropriate for community health.
PROJECT GOAL:
Identify programs and policies that effectively promote and increase the use of trails among youth, especially those from under-resourced neighborhoods or communities.

Improving Access to and Use of Trails Among Youth in Under-Resourced Communities

In November, NCCOR published “Identification of Effective Programs to Improve Access to and Use of Trails among Youth from Under-Resourced Communities: A Review” in the International Journal of Environmental Research and Public Health. The primary aim of this review was to identify programs and policies that effectively promote and increase the use of trails among youth, especially those from under-resourced neighborhoods or communities. Importantly, no studies were located that evaluated programs designed to promote and increase trail use among youth. Thus, this new research publication vividly highlights the lack of scientific evidence that addresses the underrepresentation of trail use by youth from under-resourced communities.

Three additional goals of the review included identifying (1) correlates of physical activity/trail use and features of transportation systems or built environment and land use destinations that may inform and support the planning and implementation of programs to promote trail use among youth, (2) benefits associated with trail use, and (3) barriers to trail use. Correlates of physical activity with transportation systems (e.g., trail access, road traffic congestion related to safe active travel, lack of sidewalks, proximity to trails, access to transportation), destinations (e.g., park availability and access, park improvements, greenspaces), or both routes and destinations (e.g., perceptions of safety, lighting) were identified. These correlates may support the planning and implementation of community programs to increase trail use among youth and greater program participation by connecting trails or routes to such future destinations. A benefit of trail use is an increase in physical activity behavior. Barriers to trail use included costs, crime, lack of transportation, lack of role models using trails, and institutional discrimination.
NCCOR’s Highlights of 2020

Despite the challenges related to COVID-19, 2020 was one of NCCOR’s most successful years. Keep reading to learn more about some of our accomplishments from the last year.

NCCOR’s External Scientific Panel (NESP)
Linda (Lynn) Barbour, MD, MSPH, FACP
Ross C. Brownson, PhD
John Cawley, PhD
Amelie G. Ramirez, DrPH
Lisa Powell, PhD
Analia G. Ramirez, DrPH
Thomas N. Robinson, MD, MPH
Elsie M. Taveras, MD, MPH
Mary Story, PhD, RD
James F. Sallis, PhD
Terry Huang, PhD, MPH
Dympna Gallagher, EdD
John Cawley, PhD
Ross C. Brownson, PhD
Linda (Lynn) Barbour, MD, MSPH, FACP
Panel (NESP)
NCCOR’s External Scientific

Childhood Obesity Evidence Base
In September, Childhood Obesity published four papers highlighting findings from NCCOR’s Childhood Obesity Evidence Base (COEB) Project, a collaborative effort between NCCOR and Mission Measurement to use a novel taxonomic method of data aggregation on obesity prevention efforts for children ages 2–5 years. Findings using the NCCOR COEB database found interventions focused on early childhood obesity prevention efforts may be successful. Specific intervention components that emerged as promising strategies include 1) training caregivers in healthy behavior change strategies, particularly reducing screen time, 2) engaging health care providers directly in the delivery of obesity prevention efforts, and 3) using health care settings where effective. The NCCOR COEB searchable database and project documentation are available on the NCCOR website for researchers to use.

The papers are accompanied by commentaries by Dr. Shiriki Kumanyika, Dr. Christina Economos, and Dr. Debra Haire-Joshu. The four articles and two commentaries are described below.

A Guide to Methods for Assessing Childhood Obesity
Measurement is a fundamental component of all forms of research—that’s why it’s a top priority for NCCOR to promote accurate measurement by encouraging the consistent use of high-quality, comparable methods across childhood obesity prevention and research.
In keeping with this mission, NCCOR released a new tool for those working on assessing childhood obesity. A Guide to Methods for Assessing Childhood Obesity helps users understand the most common adiposity assessment methods and select the most appropriate method for the particular objective. The Guide describes six methods commonly used to assess body composition in children and highlights procedures, validity and reliability, reference data, accessibility, cost, and participant burden and risk. This Guide also includes six case studies on topics such as infant adiposity and maternal gestational weight gain to help practitioners address obesity in the first 1,000 days.

A Rationale for Taxonomic vs. Conventional Meta-Analysis
Introduces the rationale for a taxonomic meta-analysis of childhood obesity prevention interventions in comparison to a conventional meta-analysis.

Methods for Taxonomy Development for Application in Taxonomic Meta-Analysis
Explains the methodology used to generate the taxonomy specific to childhood obesity prevention interventions targeting children ages 2–5, which can be applied to other areas of research, including obesity prevention for other populations.

A Systematic Review and Meta-Analysis of a Taxonomy of Intervention Components to Prevent Obesity in Children 2 to 5 Years of Age, 2005 to 2019
Evaluates the efficacy of childhood obesity interventions and applies a taxonomy of intervention components to identify specific components that increase the efficacy of these interventions in their context.

Building Translational Capacity Through Meta-Analytic Methods
Highlights COEB contributions to the fields of meta-analysis and prevention of childhood obesity and discusses uses and limitations of the method.

Learning More from What We Already Know About Childhood Obesity Prevention
Is a commentary from Shiriki Kumanyika, PhD, MPH, which reflects on the importance and potential implications of the project from a methodological perspective.

Preventing Obesity in 2–5 Year Olds: A Pathway to Advancing Intervention Research
Is a commentary from Christina D. Economos, PhD and Debra Haire-Joshu, PhD, which discusses several research design, methods, and implementation areas to improve the efficacy of these interventions.

Findings using the NCCOR COEB database found the following interventions, focused on early childhood obesity prevention efforts, may be successful:
- training caregivers in healthy behavior change strategies, particularly reducing screen time,
- engaging health care providers directly in the delivery of obesity prevention efforts, and
- using health care settings where effective.

Total website pageviews: 200,081
Translating the Youth Compendium

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. In response to the rise of childhood obesity in Latin America and a need identified by NCCOR members and Latin American researchers for a tool to help address the growing epidemic, NCCOR translated this valuable tool into Spanish.

The Spanish version includes translations common in Spain, Mexico, and Colombia. It can be used by a wide variety of people—from researchers and health care professionals to teachers, 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 translation also comes with a fact sheet about using the Youth Compendium in Spanish.

In addition to the Spanish translation, NCCOR also translated the Youth Compendium of Physical Activities into Mandarin. This need was identified by experts who helped develop the Youth Compendium, as they observed the value for this tool in China, since there are mandatory fitness exams in Chinese schools.

New fact sheet for classroom teachers

In addition to the Spanish and Chinese translations of the Youth Compendium, NCCOR also released a new fact sheet that shows classroom teachers how to incorporate the Youth Compendium into their curricula. The new fact sheet helps elementary through high school teachers select moderate to vigorous physical activities to keep students active throughout the day. Examples of activities include jumping jacks, hopping, skipping, and ball games such as bouncing and dribbling. Many of these activities can also be adapted to the online learning environment.

This new fact sheet can be used in conjunction with NCCOR’s Youth Compendium Fact Sheet for Physical Education Teachers, which assists educators in creating lesson plans for physical education classes.

NCCOR Student Hub

This year, NCCOR launched the new NCCOR Student Hub to support future generations of researchers and practitioners working on childhood obesity research. Students and faculty focused on public health, nutrition, physical activity, and childhood obesity will find key resources to support coursework and research all in one place. The Student Hub offers free tools and materials created by experts, along with real-world student case studies. Along with the Student Hub webpage, NCCOR launched a quarterly Student Hub e-newsletter for students to receive the latest news on NCCOR tools and resources via email.

To help students understand how to use the Measures Registry for their research, NCCOR created a new case study called “Summer Research: Examining adolescent physical activity and social networks at summer care programs.” This case study and complementary webinar walks users through one student’s real experience using this resource for his research and can be found on the Student Hub.

Childhood obesity resources related to COVID-19

With children staying at home during the pandemic, risk factors for obesity have been on the rise. This comes as no surprise, as research finds children are more likely to gain weight during summer months when they are home from school. That’s why NCCOR compiled a wide range of childhood obesity resources related to COVID-19. Available on the NCCOR website, the list contains resources from research repositories to tools for classrooms teachers to nutrition guidance for practitioners and more. The list continues to be updated as new resources become available.
Advancing Measurement of Environmental and Policies on Childhood Obesity
FEBRUARY 27-28, 2020
This workshop brought together leading experts to (1) illustrate current challenges, needs, and gaps in measurement of environment and policy; (2) discuss current practices used to adapt existing measures and develop new measures of environment and policy; and (3) determine how NCCOR can contribute to better measurement and measurement practices over the short term (1–3 years) and medium term (3–5 years) for research and evaluation on selected environmental determinants related to childhood obesity.

Assessing the Economic Impact of Community Investments to Improve the Built Environment for Physical Activity Expert Panel
JUNE 2–3, 2020
Prior to the expert panel, NCCOR had identified several economic indicators that can be used to support infrastructure improvements. NCCOR hosted the expert panel to identify the most critical economic indicators based on expert feedback. A select group of subject matter experts were invited to participate on the panel given their expertise in a number of domains relevant to the effort such as transportation, housing, and economic development. The expert panel was hosted by Drs. Angie Cradock and David Buchner, and seven experts helped facilitate breakout sessions over the course of the two-day meeting.

Improving Surveillance of Youth Active Travel to School
SEPTEMBER 25 (PRE-WORKSHOP WEBINAR), OCTOBER 14–15, 2020
The purpose of this workshop was to address key challenges related to measurement and surveillance of youth active travel to school (ATS) and related environmental, policy, and program supports. Participants discussed the topics below to identify gaps in existing surveillance systems as well as needs of relevant stakeholders.

- Measurement of youth ATS for public health surveillance
- Measurement of key environmental supports for youth ATS
- Measurement of key program and policy supports for youth ATS
- Strategies for linking behavioral measures with measures of environmental, program, and policy supports

Conference: Active Living Conference
ORLANDO, FL
FEBRUARY 2–5, 2020
This conference brings together active researchers and practitioners from more than 30 disciplines to advance knowledge and action around physical activity and active communities.

- SESSION: Systematic Review of Active Travel to School Surveillance in North America and NCCOR’s Research and Evaluation Tools for Students
  - EXPERTS: Mary K. Wolf, PhD; Noreen C. McDonald, PhD; Kathleen. B. Watson, PhD; Stephanie M. George, PhD; Emily A. Usery, PhD, MPH; Hatidza Zaganjor, MPH
  - EXHIBIT BOOTH

American Academy of Pediatrics
VIRTUAL
OCTOBER 2–5, 2020
This conference convenes health education and promotion professionals to share best practices, learn about new trends in the field, network with one another, and support each other in professional development.

- SESSION: NCCOR’s Research and Evaluation Tools for Students
  - EXPERT: Hatidza Zaganjor, MPH
  - EXHIBIT BOOTH

Society of Public Health and Education Annual Conference
VIRTUAL
MARCH 17–20, 2020
This annual conference convenes health promotion professionals to share best practices, learn about new trends in the field, network with one another, and support each other in professional development.

- SESSION: NCCOR’s Research and Evaluation Tools for Students
  - EXPERT: Hatidza Zaganjor, MPH
  - EXHIBIT BOOTH

Society for Nutrition Education and Behavior Conference
VIRTUAL
JULY 20–24, 2020
This conference is the premier event for nutrition education professionals from around the world. Attendees interface with influential nutritionists from extension, public health, government, academia, industry, and community settings.
In 2020, NCCOR took steps to address the social determinants of health in childhood obesity research—but much work remains. NCCOR will continue to pursue innovative approaches to childhood obesity research, while prioritizing equity for our most vulnerable populations. The following are a few of the activities that NCCOR will pursue in 2021:

• Addressing key challenges to surveillance of youth active travel to school in a new whitepaper
• Exploring new innovations and strategies to improve dietary assessment, especially in infancy and under-five populations
• Promoting trail use among under-resourced youth in a new brief that will be used to inform future research and practice
• Developing a research agenda related to childhood obesity and COVID-19
• Updating the Measures Registry and Catalogue of Surveillance Systems
2020

NCCOR by the numbers

CONFERENCES
7

EXPERTS
79
outside experts engaged
through workgroups, Connect & Explore
webinars, workshops, and meetings

E-NEWSLETTER
5,852
NCCOR general e-Newsletter subscribers
9% INCREASE

598
NCCOR Student e-Newsletter subscribers
67% INCREASE

WEBSITE
888,235
NCCOR.org total page views
211% INCREASE

TOOLS
201,081
page views of A Guide to Methods for Assessing Childhood Obesity
(LAUNCHED SEPTEMBER 2020)

Thank You.

A big THANK YOU to all NCCOR members for your efforts in 2020. You took steps to keep us safe, took on extra work, worked night shifts and more, all while advancing childhood obesity research. All of NCCOR's success this past year would not have been possible without you going above and beyond.