

# Meeting Summary

## National Collaborative on Childhood Obesity Research (NCCOR)

### Member Meeting

September 22, 2016  
8:30 a.m. to 3:30 p.m.

Centers for Disease Control and Prevention  
2500 Century Parkway NE, Room 1200  
Atlanta, GA 30345

**Participants:** R. Ballard, B. Belay, H. Blanck, D. Brown, L. Canady, S. Carlson, P. Cotton, E. Ester, S. Fleischhacker, G. Frederick, J. Fulton, D. Galuska, C. Gibbons, M. Harrison, L. Kettel-Khan, J. Kimmons, E. Lundin, D. McGuire, J. Napoleone, A. O'Connor, A. Oh, S. Onufrak, J. Omura, S. Park, J. Parks, M. Pedroso, R. Petersen, E. Peterson, T. Phillips, D. Poyen, M. Putnam, A. Rodgers, A. Samuels, J. Seymour, J. Soares, J. Suarez, A. Tyler, M. Trowbridge, E. Ussery, N. Vaidya, Y. Valdes, E. Vandeen, J. Variyam, A. Warnock, K. Watson, G. Whitfield, A. Yaroch, D. Young-Hyman, H. Zaganjor. **By phone:** S. Arteaga, D. Berrigan, D. Johnson-Bailey, T. Kauh, J. Reedy

#### WELCOME AND INTRODUCTIONS

Todd Phillips welcomed all the participants, particularly the members from CDC, and thanked CDC for hosting the event. He then asked everyone to introduce themselves.

Following the introductions, he reviewed the agenda, noting that the focus for the day would be on potential opportunities for NCCOR to extend its work to advance the physical activity agenda. He reviewed the participant packets and urged members to check the NCCOR Contact List and provide any corrections to Coordinating Center staff.

Rachel Ballard provided a brief overview of NCCOR for new members and those in attendance for the first time. She noted that a major focus of NCCOR's work is to identify research gaps, address them through various types of activities, and to translate research into tools for researchers and program implementers.

#### OPENING REMARKS – RUTH PETERSEN

Kathy Watson introduced Dr. Ruth Petersen, the Director of CDC's Division of Nutrition, Physical Activity, and Obesity (DNPAO). She noted that Dr. Petersen brings to CDC a wealth of experience from her time in private medical practice and as the Director of the Department of Chronic Disease and Injury in the North Carolina Department of Health. She also stated that it was particularly exciting to give Dr. Petersen this opportunity to learn about NCCOR and its activities.

Dr. Petersen thanked K. Watson and extended a warm welcome to all the participants. She opened her remarks by saying that her experience in a state health department and in clinical practice as an

obstetrician-gynecologist had given her a fine appreciation for the importance of obesity as a public health problem and of the key role that physical activity plays in keeping children and families healthy. She noted that CDC staff regard NCCOR as a “strategic pin” in efforts to move things forward in this arena and thanked T. Phillips and L. Canady for their leadership of NCCOR’s Coordinating Center.

Dr. Petersen noted that she was very impressed with how the evidence base for obesity prevention is developing and with how diverse groups are working together to achieve common goals. She particularly applauded NCCOR’s work in youth energy expenditure, the built environment, and the retail environment. She noted that she was on a site visit in Alabama recently and public health officials there stated that they are looking for help, especially in the arena of the retail environment. Dr. Petersen noted that she was eager to hear about a number of NCCOR projects because they are producing critical resources and tools that would not otherwise be available. Resources like the Youth Compendium; the Catalogue of Surveillance Systems, Measures Registry and Measures Registry User Guides; and the SNAP-Ed evaluation framework are what will move the field forward.

Dr. Petersen closed by saying that CDC recently released obesity data. Progress is being made in some places but not all. We still have lots of work to do. Those who do not work in this field think it is easy, but it is challenging and messy. She thanked NCCOR for “working in the messiness” and for providing opportunities like the member meetings, which give people time to think strategically and build relationships.

## **PROJECT UPDATES**

### ***Youth Energy Expenditure (YEE) – Kathy Watson***

K. Watson reminded members that the goal of the YEE workgroup is to achieve consensus on methods and measurements to improve energy expenditure estimates for youth and to develop a plan for updating, reformatting, and making more accessible the original compendium of youth physical activities.

The workgroup has developed and will publish several manuscripts that describe metrics for YEE estimation, and met August 29–30 to plan the new Youth Compendium of Physical Activities. The Youth Compendium will be an online resource housed on the NCCOR website. Development of the design elements and the content are well underway, and a manuscript describing the development of the Youth Compendium is under development. In addition, YEE workgroup members will present a tutorial on the project at the 2017 American College of Sports Medicine conference.

### ***Measures Registry User Guides – David Berrigan***

D. Berrigan explained that the purpose of this project is to develop four Measures Registry User Guides to help practitioners and researchers find and select the best and most appropriate measures for their work. The User Guides, which will be posted in an easy-to-access format on the NCCOR website, are funded through a strategic alliance with the JPB Foundation. JPB is tremendously interested in the project and how to move forward in this area.

Four User Guides are being developed. The two Physical Activity Guides are in final draft, and the two Nutrition Guides are well underway. The project workgroup plans to release the final guides on the NCCOR website by January 2017 and to start conversations around next steps and future related activities.

R. Ballard noted that this project came out of a strong recommendation from the NCCOR expert advisory panel to develop products that help people use NCCOR tools.

#### ***Health and the Built Environment – Rachel Ballard***

R. Ballard explained that this project aims to explore behavioral design as a concept and its application to healthy living. Much of the evidence base in obesity centers on dietary intake, but evidence is evolving to include physical activity, especially for children. A few years ago, NCCOR carried out a built environment project related to schools and this new work is an extension of that project. NCCOR encouraged DNPAO's Joel Kimmons to join the workgroup and he has helped the group consider how a conceptual framework for health and the built environment can be applied to public health approaches.

The workgroup initially thought of holding three workshops aimed at identifying behavioral design principles, applying them to active living and healthy eating strategies, and disseminating this knowledge to inform and improve research efforts. The group held the first workshop in March and has drafted a white paper outlining overall behavioral design principles, gaps, and considerations. The white paper should be completed by the end of this year.

The workgroup decided its best next step is to reach out to the Environmental Design Research Association to learn about their work and talk with them about potential opportunities for collaboration.

#### ***Engaging Healthcare Providers – Brook Belay***

B. Belay explained that the goal of this project is to help health care providers, systems, and federal agencies understand how research in childhood obesity prevention can be used in clinical settings, and to support these groups to develop linkages by sharing best practices and evaluation strategies.

The workgroup completed development of its white paper summary of the November 2015 workshop on evaluation of clinic-community linkages. The paper includes a draft logic model for groups to use in their evaluation efforts as well as draft metrics. It also held two webinars and a third is planned for November 10. The white paper will be presented at the November webinar. The group also is thinking about developing a learning network to share best practices on evaluating weight management programs.

#### ***Evaluation and Impact of NCCOR Tools – Amy Yaroch***

A. Yaroch explained that NCCOR expressed interest in looking at the impact of the Measures Registry and the Catalogue of Surveillance Systems. An online survey was administered in July and August on the Qualtrics platform. The survey had 43 items with skip patterns, and survey recipients were asked about the use of these tools for manuscript preparation, grant proposal preparation, lecture/presentation delivery, and secondary data analysis. Unfortunately, the response was weak (25/111 NCCOR members and 265/4,040 investigators and NCCOR newsletter recipients).

The results have just come in and the primary message is that a high percentage of people do not know about these tools, but those who do know about them are using them in a variety of ways.

- Examples of how the Measures Registry is used:
  - Used as resource in classes (e.g., Public Health Nutrition Practice, Epidemiology, Nutrition and Society, Community Nutrition)
  - Identified valid and reliable measures to cite in grant proposals

- Helped to identify new items for survey development
- Identified instruments to use in evaluation of interventions
- Referred colleagues outside of PA/Nutrition to Registry
- Examples of how the Catalogue is used:
  - Identified evidence-based tools to support background sections of manuscripts and reports
  - Used as a resource in classes (e.g., Public Health Nutrition Practice, Community Nutrition, Obesity Policy)
  - Identified instruments and items to measure impact of interventions

Next steps include continued analysis of survey results and full presentation of results at future NCCOR meetings. In addition, NCCOR is considering conducting key informant interviews to further explore survey topics and possibly reopening the survey in hopes of getting a better response.

### **PROJECT UPDATES DISCUSSION**

In the discussion following the project updates, members raised the following issues:

- It would be very helpful to get some perspective on how program staff and practitioners are using NCCOR tools. NCCOR should explore the possibility of doing some usability testing with various audiences, especially around language and applications. Existing networks, such as CDC's Nutrition and Obesity Policy Research and Evaluation Network (NOPREN), might be a useful way to obtain additional feedback.
- The survey results are not too surprising, and that may be due in part to the way the questions were framed. NCCOR could consider having different versions of the survey designed for different audiences (federal staff, other groups).
- It is hard to know what percentage response would be a "good" response. In-depth interviews may be a better way to learn about these tools than a reopened online survey.
- Expanding efforts to tell people about these tools would be a good next step. These efforts could include working through NOPREN and CDC's Physical Activity Policy Research Network (PAPRN) and developing slides about the tools to add to all NCCOR talks.
- The release of the User Guides will be a good opportunity to reenergize marketing and promotion around these resources, especially to attract new users and to educate people, both inside and outside the field of obesity prevention, about the many uses of these tools.
- NCCOR has a number of promotional tools, including print materials, videos, and promotional cards that can be used for this purpose.

### **COMMUNICATION ACTIVITIES**

T. Phillips provided a brief overview of recent and planned NCCOR communications activities. These include:

- Five Connect & Explore webinars between June and September. These were extremely popular and attracted a good mix of attendees.
- NCCOR Thunderclap, in which 100+ Twitter accounts sent out the same NCCOR message simultaneously. 114 supporters participated, and 1,589,266 people were reached.

- Three new Connect & Explore webinars are scheduled for October 24 (Bridging the Gap: School District Wellness Policies), November 10 (Evaluating Health Care-Community Collaborations), and December 3 (National Academy of Sciences: Assessing Prevalence and Trends in Obesity)

NCCOR also reaches a variety of audiences through several different social media tools and its Annual Report.

NCCOR will be attending the American Public Health Association meeting October 30–November 2. It will be in the Exhibit Hall at Booth 802. Members should let the Coordinating Center know if they plan to attend.

During the discussion that followed this presentation, members made the following observations:

- At the next NCCOR meeting, have a session to explain all the different communication channels that NCCOR uses, especially the new social media channels and the decision-making that goes into using one or another for specific purposes.
- Representatives from each partner’s communications team get together periodically. How can they amplify NCCOR? The partners need to encourage their communications people to promote NCCOR. It might be helpful to have Steering Committee members join these meetings periodically to keep the communications team up-to-date on their knowledge about NCCOR.

#### **PERFECT STORM FOR PHYSICAL ACTIVITY – JANET FULTON**

J. Fulton opened her presentation by noting that she would focus on three questions:

- Why do we think now is the “Perfect Storm” for physical activity?
- What makes up the “Perfect Storm”?
- How might NCCOR contribute to the “Perfect Storm”?

One out of every two U.S. adults is living with a chronic disease, such as heart disease, cancer, or diabetes. The good news is that many chronic diseases can be delayed, prevented, or managed through healthy behaviors. Along with eating a healthy diet and avoiding tobacco use, people can decrease their risk of chronic disease by being physically active. However, half of adults and three-fourths of youth do not achieve the recommended amount of physical activity for optimal health. Data from the Youth Risk Behavior Surveillance Survey (YRBSS) from 2011–2015 show that the prevalence of physical activity among youth is low and not improving over time. A major limitation is that the survey covers only high school youth.

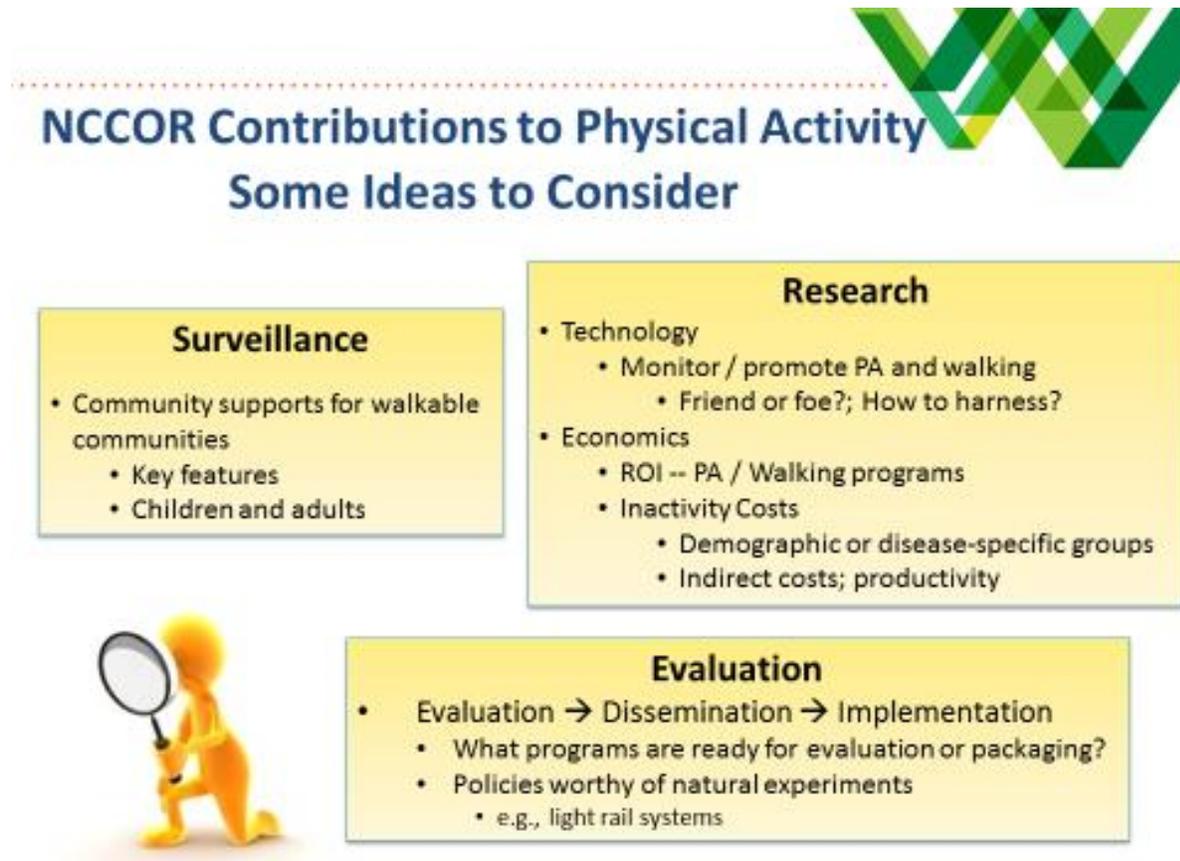
Now is the “Perfect Storm” to move forward to create a culture where easy and safe options for physical activity and walking are the default option. Several seminal documents provide scientific guidance:

- The newly updated National Physical Activity Plan presents a comprehensive strategic plan for increasing physical activity in all U.S. population segments. It includes 50 strategies and 260 tactics across nine societal sectors. Two of its priorities—establish a comprehensive surveillance system and promote physical activity policy develop—are particularly relevant to promoting and evaluating physical activity among children and youth. Two of its public health strategies deal with dissemination of tools.

- To really move forward, a modern vision is needed that emphasizes cross-sector collaboration, environmental policy, and systems-level actions that affect the social determinants of health. In a 2016 paper in the *American Journal of Public Health*, Karen DeSalvo laid out this vision in what she calls “Public Health 3.0: Time for an Upgrade,” and it has great relevance for encouraging greater physical activity. CDC has translated this call to action into five action steps:
  - Mobilize physical activity partners
  - Train leaders for action
  - Message active lifestyles
  - Deliver physical activity programs that work
  - Report using technologies, tools, and data that matter
- The Surgeon General’s Call to Action on Walking is the next key document. Its five goals are to:
  - **Make walking a national priority by encouraging people to promote walking and creating a national walking movement.** Several national and federal efforts already support walking, physical activity, and improved places to be active. Working individually and together, these groups have already begun creating a national walking movement and we can amplify these existing efforts. The National Plan provides strategies and tactics that can help every sector collaborate to make communities more walkable.
  - **Design communities that make it safe and easy to walk for people of all ages and abilities.** Supportive design can be implemented in large and small communities in diverse geographic areas. Another way to make walking easier is to support well-maintained public transit systems. As of December 2015, 30 states and the District of Columbia have adopted Complete Street policies and 856 policies have been adopted at the local and regional level.
  - **Promote programs and policies to support walking where people live, learn, work, and play.** Schools and worksites are particularly important locations to achieve this goal. Safe Routes to School is an important initiative that is helping children walk and bike to and from school, and Shared Use Agreements between schools and the community increase opportunities for physical activity. Community locations and organizations can provide other opportunities for safe walking and physical activity. Several initiatives, like Walk with a Doc, Walk with a Future Doc, and Play with a Doc, combine physical activity with health education.
  - **Provide information to encourage walking and improve walkability.** Easy-to-understand and relevant information about how walking can provide substantial health benefits and where people can walk safely can motivate people to walk. In addition, the media and other relevant professionals, such as health care professionals, can be engaged and trained to help spread the word about walking and walkability. Another way to encourage walking is through informational behavioral nudges, such as point-of-decision prompts near elevators. CDC’s Atlanta airport study of point-of-decision prompts showed a 17% improvement in walking after the prompts were installed.
  - **Fill surveillance, research, and evaluation gaps related to walking and walkability.** Existing research provides an evidence base about what works to increase walking in the United States. However, gaps in surveillance, research, and evaluation work need to be filled to maximize the success of community approaches and address disparities in walking and walkability. A recent paper in *Medicine & Science in Sports & Health* outlined physical activity surveillance needs and priorities. A National Academy of Sciences committee is now

taking the information in this paper and developing approaches for how to operationalize an improved surveillance system.

J. Fulton closed her presentation by posing some possible ways that NCCOR could contribute to the physical activity “Perfect Storm”:



- Surveillance: Activities to better understand community supports. Are they different for children and adults?
- Research: Is technology our friend or foe? How to harness it better to monitor physical activity. We need better economic information: \$117 million in costs is associated with inactivity; this is good to know but we need more information.
- Evaluation: How best to package programs? NIH is doing a lot in this area. Evaluation of natural experiments is an area ripe for exploration.

Members made the following points in the discussion after Dr. Fulton’s presentation:

- Physical activity is not getting the emphasis it needs to move forward in addressing chronic disease; 28% of adults 50+ are inactive (0 minutes). CDC is looking at improvements in small increments, such as 10 minutes.
- Targeting the health care system may have a useful payoff. NIH’s diabetes prevention program is now having a broad roll out. The Centers for Medicare and Medicaid Services will reimburse

providers for enrolling people in the program. Diabetes is very sensitive to physical activity and this presents a real opportunity to affect physical activity.

- Individual-level initiatives include exercise prescriptions for youth, the Exercise as Vital Sign program, and Prescription for Parks for Kids program. Results on the effectiveness of these programs are not yet available.
- Is it possible to get doctors who have electronic health record systems (EHRs) to include a landscape of local resources on their system? This would allow the clinician to knowledgeably discuss options with patients. It is possible to put in filters into EHRs to sort through these issues? We would need lots more information to move ahead with an idea like this. PCORI has funded an effort on how to use GIS to map resources. The Blue Cross Blue Shield Association has a point of contact with this program and links with 4–6 states.
- The discussion of point-of-decision prompts triggers a thought about Return on Investment. Encouraging walking in airports or other public spaces spurs foot traffic in front of stores, which is of great interest to merchants. Increased walking not only reduces public transportation costs but it increases foot traffic in front of stores.
- Perhaps NCCOR could help develop a tool that would screen and assess new physical activity interventions.

#### **PHYSICAL ACTIVITY TOPICS BRAINSTORM**

To open the brainstorm of potential physical activity topics that NCCOR could pursue, R. Ballard enumerated relevant activities ongoing at NIH:

- A methods workshop on pathways to prevention is being planned (evaluating natural experiments in diet and physical activity). CDC will participate in planning. The workshop will include an evidence-based review and talks. The workshop will address many of the areas discussed so far at the member meeting. Planners acknowledge that it is necessary to have good evaluation, data, and surveillance systems because randomized controlled trials (RCTs) are not possible.
- The National Cancer Institute, the Office of Behavioral and Social Sciences Research, and the Office of Disease Prevention have begun to talk about elements of dissemination and implementation (D&I) research that NIH would be interested in.
- The updated Community Guide will be released in the next few months. It includes an assessment of more than 90 research studies on physical activity environmental factors. This report will be very helpful.
- The MoTrPAC Initiative is a \$170 million effort to elucidate the molecular characteristics that are influenced by physical activity.
- NIH is adding behavioral variables to basic research studies to determine whether they influence genetic markers.
- The National Cancer Institute (NCI) Policy Forum will be meeting soon and will be considering physical activity.
- A NCI Division of Cancer Control and Population Sciences cancer survivor's initiative also is considering physical activity.

She then suggested that the members consider having a workgroup on each of the three areas: Surveillance, Research, and Evaluation. Members agreed to begin thinking about potential activities through these three lenses.

Members also discussed what can be done to improve the Dissemination & Implementation (D&I) of physical activity interventions and how to help investigators understand whether their intervention is ready for D&I. In physical activity, evidence does not come from RCTs, so it can be difficult to know how they will fare during peer review. It has been a struggle for investigators to be successful and to meet the requirements for “tested and proven” interventions. D. Young-Hyman noted that she is on the D&I coordinating committee at NIH and the members discuss this issue all the time. There is room for non-RCT designs as long as researchers include demographic, health determinant, and cost variables. Discussions are ongoing about measurement and reliability of measures if studies are not done in an RCT environment. Traditional researchers are being encouraged to add these components so they can demonstrate efficacy.

R. Ballard noted that the physical activity field has an advantage in its ability to use GIS and accelerometers, which are perceived to provide reliable, “objective” data.

One member stated that street-scale and community-scale interventions are also seen as economic revitalization interventions in small and mid-size communities. Is public health missing an opportunity to ride the coattails of economic revitalization efforts in these communities? Perhaps it would be useful for NCCOR to talk with urban planners to learn what gaps they see. Dr. Fulton agreed this would be a good idea and mentioned the Smart Growth America report as a possible resource.

R. Ballard also reminded the group that it is possible to propose special projects for NHANES. USDA is working on a Birth to 24 Month project to prepare for the 2020 Dietary Guidelines. This effort covers pregnant women, breastfeeding women, their infants, and mother-infant dyads. This group is considering adding an NHANES component for these populations and asking for input on the physical activity components of these questions. NIH will provide the funding for these efforts. The National Center for Health Statistics, which manages NHANES, will make a preliminary decision by December and final decision by March. CDC and NIH are providing information and suggestions to the decision-making process.

## **PANEL ON POLICY AND ENVIRONMENTAL APPROACHES TO PROMOTE PHYSICAL ACTIVITY**

### **The Evolution of Safe Routes to School – Margo Pedroso**

Margo Pedroso opened her presentation by explaining that the Safe Routes to School National Partnership is a nonprofit organization that improves the quality of life for children and communities by promoting active, healthy lifestyles and safe infrastructure that supports bicycling and walking. Equity is at the forefront of its work.

In 2005, Congress created a new federal program called Safe Routes to School. It was based on a couple of pilots in the United States, and the idea had caught the imagination of Rep. Oberstar, who was a leader on transportation funding. This new federal program provided funds to every state—\$183 million/year nationwide at its peak—and required state departments of transportation (DOTs) to staff and administer the program. The idea was to combine infrastructure improvements around schools with driver and parent education and events to get families in the habit of walking and biking and to then assess progress. The conceptual framework was the 5 Es—engineering, education, enforcement, encouragement, and evaluation.

However, the program faced challenges because schools and parents were not familiar with it and state departments of transportation (DOTs) were baffled. They knew how to put down pavement, but did not know how to do programming. Schools were not their usual constituency. Safe Routes to School also did not have proof that the program worked.

The program received funding from the Robert Wood Johnson Foundation to build networks of advocates in key states to help educate DOTs and schools about how this funding worked and about best practices. The program also pushed to collect data—participating schools were given easy ways to track changes in parent attitudes and how children were getting to school, creating great opportunities for researchers. Safe Routes to School also made partnerships a core element because they were essential to accomplishing the basic elements of the program and to advocacy for the program. Health groups were an early adopter. Safe Routes to School was an easier concept for more conservative, car-focused communities to buy into when it was promoted as a way to improve safety for children. This then gave them a “way in” to increasing physical activity and creating more transportation options.

Moving to the present day, some of the initial barriers have been solved: money is flowing (\$1.2 billion in dedicated funding to 15,000 schools); advocates are getting state, regional, and local governments to contribute; the program is increasingly familiar to those in the transportation and school sector; and robust partnerships have been developed at multiple levels. The research base also has grown; Safe Routes to School works:

- Safe Routes to School programs lead to a 35–45% increase in walking and bicycling to school
- Safe Routes to School programs result in a 45–75% decrease in pedestrian injuries near school
- Children who walk and bike are more physically active, fitter, and have lower BMIs than those who do not

However, there are significant areas of the country (especially the South and Midwest) in which progress is needed, and work is needed to ensure that funding and improvements get to those who need it most. Safe Routes to School has added a 6<sup>th</sup> “E” —equity—to highlight this need.

One of the exciting things about the Safe Routes to School movement is that it now has a place within the larger healthy communities frame. It is often a launching pad for communities to engage in other health-promoting activities. Safe Routes to School has developed state report cards that score states on 24 indicators across four topic areas (Complete Streets/Active Transportation, Safe Routes to School/Active Transportation Funding, Active Neighborhoods and Schools, State Physical Activity Planning). This initiative is funded by CDC’s Physical Activity and Health Branch and carried out in partnership with the YMCA. The 2016 reports cards show that most of the states are in the middle—they have taken some action, but still have room for improvement.

The Safe Routes evidence base is growing but additional data are needed:

- More data on related state and local policies
- Linking report card policies with actual health impacts
- Impacts of Safe Routes to school beyond just health
- Consistent, national longitudinal data that can be drilled down to state level
- Sidewalk databases to allow for mapping and equity analyses

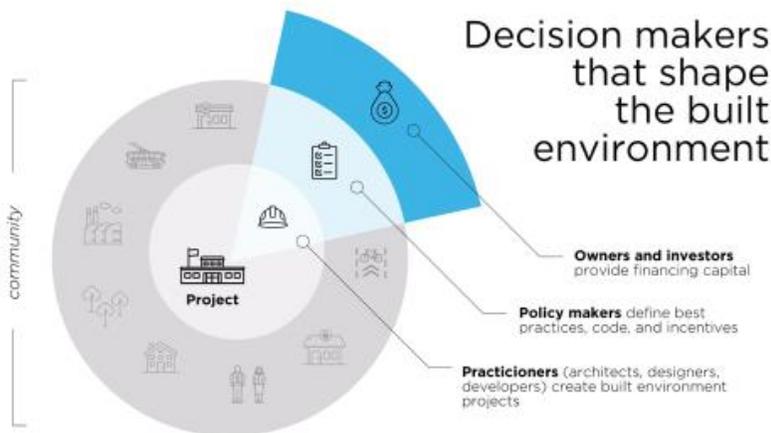
Consistent, national longitudinal data also are lacking. The National Household Travel Survey provides a wealth of information but it is conducted only every seven years and the most recent data are from 2009. Several other surveys provide data but major gaps remain in non-work active transportation, state health policies, personal safety issues that children face when walking to school, information on children younger than high school age, and mapping data.

### **Physical Activity Design Guidelines for School Architecture – Matthew Trowbridge**

Matt Trowbridge opened his presentation by explaining that he would be describing work done with the RWJF-funded Green Health Partnership and that much of what he would discuss was built on the earlier NCCOR Green Health project. He added that Dr. Terry Huang has been a close collaborator on this project.

Dr. Trowbridge has been working with the Green Building Council to see whether it is possible to extend the “green building” concept of environmentally sustainable buildings into a broader health context. The concept of green buildings has evolved from a controversial approach to standard operating procedure, and in so doing has transformed the building design market. The idea is to use a similar market transformation approach to drive the diffusion of a broader concept of health-promoting building design. This can be done by codifying best practices, certifying them, and disseminating them to the whole field.

One approach to accomplishing this goal is to think about the built environment as a system. Rather than thinking about the specific disciplines involved in creating that environment, it is better to think on a project scale and consider all the decision makers who shape the built environment.



The challenge is to equip built environment decision makers with the knowledge and tools they need to intentionally address health and well-being in planning, designing, and building projects.

Dr. Trowbridge then took meeting participants on a tour of Buckingham Elementary School in Dillwyn, VA that has been built with health and well-being in mind. Every space in the school was designed as an optimal place to teach about healthy eating, active living, and obesity prevention. The school

incorporates physical activity design guidelines for school architecture presented in a recent [PLOS ONE paper](#). These design guidelines are not organized topically (e.g., reducing sedentary time, increasing physical activity) but spatially (e.g., school siting and community connectivity, active classrooms, active navigation areas, furniture specifications, signage to encourage activity). A key component of this process is including architects in the research team. Dr. Trowbridge closed his presentation by encouraging participants to learn more about the project by visiting the website of VMDO, the architecture firm that built the school.

### **Building Health for Kids: Exploring Obesity Reduction Through Built Environment Initiatives – Liz York**

Ms. York, CDC's Chief Sustainability Officer, stated that she sees her job as being a translator between public health and architects so that she can build healthy buildings for CDC. She explained that her presentation would focus on Fitwel, a ratings system similar to the green building LEED system that focuses on health and well-being aspects of a building. Fitwel is a web-based scorecard that consists of 63 benchmark criteria that incorporate seven health impact categories and 12 aspects of the building:

Health impact categories:

- Impacts community health
- Reduces morbidity and absenteeism
- Instills feelings of well-being
- Promotes social equality for vulnerable populations
- Provides healthy food options
- Increases physical activity
- Promotes occupant safety

12 strategic aspects of a building:

- Location
- Building access
- Outdoor spaces
- Entrances and ground floor
- Stairwells
- Indoor environment
- Workspaces
- Shared spaces
- Water supply
- Food service emergency procedures

Ms. York then showed an example of a Fitwel scoring for stairwells. The example shows the strategy on the left, the public health evidence on the right, and the rationale in the middle. Organizing the scorecard this way connects the evidence to people who actually make the decisions when a new building is being built or an existing building is being renovated so they have a checklist to ensure the health goals are being met.

Ms. York explained that Fitwel is being tested in more than 90 pilot projects around the country; the results show that buildings in a few sites were doing very well, a few were doing poorly, and most were in the middle. This indicates that Fitwel is looking at the right issues and scoring them appropriately.

Ms. York closed her presentation with a photograph of CDC's Building 21, which received a score of 124 (a 3-star performance). Positive health features of the building include lots of natural light, pedestrian routes, connectivity to public transit, and outdoor spaces.

## **DISCUSSION**

In the discussion following the panel presentation, meeting participants raised several issues and questions:

- J. Seymour asked about experiences when environmental designs do not work as well as anticipated, such as open-plan high schools. How can designers and health planners balance the great design ideas with practical perspective to ensure a project works as intended?

Dr. Trowbridge responded that every space is designed and health-oriented design is still evolving. If we do not exert ourselves, design will still go on and it will not incorporate desired principles. We have to be in the conversation if health and active living is to be included in the design.

Ms. York responded that owners make a lot of decisions but they are not public health professionals or architects. We need to know more about what actually works and have research to back it up. Architecture has no extra money to fund research in these areas. We need groups like NCCOR to say what is important and what works. We need to encourage schools of architecture to support and foster work in this area and give it value.

- R. Ballard noted that there is a grid of stakeholders and schools that are at the base, as they are the users of the space. How important is to have a mobilizer group that calls for this effort to create a health-oriented space?

Dr. Trowbridge responded that architectural firms must operate in certain ways. They become involved often when a project is already defined and they have to execute it. The time for influencing these decisions is tiny compared to the overall project. Also, they stop getting paid on delivery date. The design and build business model has not been updated to incorporate broader involvement by architects and designers.

Ms. York responded that one of the key contributions of rating systems like Fitwel or LEED is that they create a standard that everyone wants to follow. If you can get the developers who are selling the building to say FitWel 3 star or LEED Platinum, then people are willing to pay more for that.

- K. Watson asked Ms. Pedroso about the metrics or areas of metrics that would be most useful to evaluate Safe Routes to School.

Ms. Pedroso replied that she would like the National Household Travel Survey to be conducted more often and wants that data available at the state level. She also would like the National Sidewalk Database to be constructed.

Another meeting participant asked whether it would be possible to do an add-on to the National Household Travel Survey, as these data are very relevant to NCCOR. One participant noted that CDC has a School Health Policies and Practices Study, which asks questions on the percent of students walk or bike to school. However, the lack of information on school siting is a big gap. K. Watson mentioned that CDC is redesigning the entire National Health Interview Survey.

One participant noted that including a walk to school question on surveys is challenging because not every child is able to walk to school. Also, National Household Travel Survey response rate is very low because people do not want to fill out the travel log. Novel approaches are needed to gather

information about how people get from one place to another. The ubiquity of cell phones may provide an opportunity to gather this information more easily.

- S. Fleischhacker ask about the cost benefit of building new buildings versus fixing existing buildings.

Dr. Trowbridge answered that the architecture and real estate industries really want this new health orientation. Using a green building design has been effective because it has differentiated the building from the rest; it creates value. Because the market transformation to “green” already has occurred, however, using this approach does not differentiate buildings anymore. “Green” made people a lot of money and now the industries want the next new thing, which is health and well-being. All these forces are coming together now to influence action now. If public health does not become part of that conversation now, we will have missed a huge opportunity.

### **SMALL GROUP DISCUSSIONS**

Meeting participants broke up into three groups for focused discussions on next steps for NCCOR’s involvement in physical activity projects and on USDA’s FoodAPS.

#### ***Physical Activity Research and Evaluation***

**Participants:** R. Ballard, D. Brown, S. Carlson, L. Kettel-Khan, K. Watson

- R. Ballard mentioned the need to take a look at gap areas and understand what is relevant to NCCOR partners.
- Over the past 10 years, the separation between research and evaluation has narrowed because so much community-level experimentation has occurred. There is now greater acceptance at NIH of policy and environmental change initiatives. This is true at CDC as well.
- The workgroup discussed what level of evidence is needed to take these programs to a different level. This is more difficult in the physical activity space. There is a need to articulate what level of evidence is needed (beyond the Community Guide) and when it is possible to move from collecting data on efficacy and effectiveness to D&I.
- The workgroup discussed, of the physical activity applications, how many would make it through a D&I study section at NIH. The group agreed that PAPRN, for example, is not ready for D&I, but the group was unsure what the state of the research is or where the knowledge gap is.
- The Community Guide is a good place to start to determine the state of the research. It looked at 90 studies, some of which could move to D&I, but many of which cannot.
- The group mentioned several projects that NCCOR could take on. Workgroups could develop some preliminary ideas about objectives and projects and then consult with the Steering Committee, which would give guidance on moving forward. Ideas include:
  - Summarize the co-benefits of physical activity and physical environment for sectors outside the health realm, such as business, financial, and economic. Bring in architects and urban planners or other relevant outside groups to participate. Develop a summary list of the most promising interventions.
  - Create a package of community interventions that address disparities and show evidence of effectiveness. Several programs are worth exploring for ideas, such as NIH’s ECHO program and USDA’s EFNEP and SNAP-Ed.

- Identify alternatives data sources to the National Household Travel Survey. Determine what data are needed to further Safe Routes to School and what alternate data sources already exist.
- Hold a convening of investigators and practitioners at the federal level who are involved in these activities, in order to harness new ideas for physical activity/physical environment space. Creating a strategic alliance in the space might be preferable to NCCOR proceeding on its own.
- Consider commissioning a systems analysis of school physical activity guidelines, similar to the analysis that Drs. Trowbridge and Huang did on school food service guidelines.
- Explore more community-clinical linkages by discussing with Brooke Belay, or sit down with the entire workgroup to find synergies and improve linkages from physician to patient. HHS will begin reimbursing providers for participation in the Diabetes Prevention Program, and this may provide an opportunity to work with the clinical community.
- The workgroup will put out a call to see who wants to explore the potential projects, to determine feasibility. The workgroup will then reconvene at a later date and discuss which projects the group will pursue.

### ***Physical Activity Surveillance***

**Participants:** J. Fulton, E. Ussery, D. Galuska, K. Watson, J. Napoloene

#### *Behavioral*

- Issues with methodology
- Limited methods to measure PA in younger kids (less than high school); there are several issues with how to measure PA among the younger kids (e.g., do parents really know what the kids are doing? Or when to measure?)
- Lack of data at local levels
- Determining types of behavior (constructs/domains?)
  - Data from various settings—place based (e.g., ECE, School, WTS, Sports)

#### *Supports*

- How many schools already have PA policies? (e.g., PE policy, many areas are missing, ECE)
- Need to determine which features are most impactful (essential?)
  - e.g., community supports (sidewalks)
  - Technology vs. other (GIS based measures vs parental perception)
- Use of novel data sources (park data?)
  - Use existing data from technology (Waze—can report issues on sidewalks)
  - Walk Score validation
    - Natural experiments

#### *Methods*

- Issues around measurement such as:
  - Standardization
  - Representative

- Over time

#### *Other constructs*

- Walk Score
- Transportation
  - Summary measures of pedestrian miles traveled
  - Translate vehicle miles traveled to pedestrian miles traveled
- Economy
  - Travelers (pedestrians) near retails
  - Healthcare + Sports → Reimbursement, Access

#### *What can NCCOR do?*

Expert Panels leading to:

- Recommendation/white paper
- Publications
- Guidance documents—toolkits

#### Research projects

- Primarily funded through a primary agency funder who sits in NCCOR

#### Priority Topics

1. Community Features “walkability”
  - a. Review (community commons)
  - b. Expert viewpoint
2. Big Data
  - a. Look at Stanford and San Diego and see what’s the next step
  - b. Link PSE data to existing systems
  - c. Scan for viability
    - i. Privacy
    - ii. Representative
    - iii. Etc.
3. Young Kids—research project/evaluation
4. How to maintain “support” for existing survey systems?
  - a. How to better market their use?
  - b. How to make the data useful?

#### **FoodAPS**

**Participants:** H. Blanck, H. Cheanjor, P. Cotton, S. Fleishhacker, S. Lee-Kwan, J. Kerning, S. Onufrak, S. Park, R. Petersen, S. Sliwah, J. Variyam

#### *FoodAPS Data*

- Comprehensive data collected of all food purchases and acquisitions
- Data collected 2012–2013
- 4,862 households
- Total expenditure
- Food prices

- 50,000–60,000 unique items aggregated into different food groups
- Household characteristics
- Nutrition Facts Panel Data
- Oversampled low income/SNAP participants
  - SNAP households were matched with administrative data to ensure whether participation
- Databases able to calculate HEI

#### *FoodAPS Data Access*

- Currently submit request to NORC
- October: release of public use files-aggregated to avoid disclosure

#### *FoodAPS 2*

- Increase number of children in sample
- Increase sample of WIC population
- Data Collection via a web-based app
  - Piloting the app on 400 households
  - Data collection will allow the household to scan the UPD and the nutrient profile with be linked to the ARS branded foods database

#### *Timeframe*

- Statement of work announced in 2017
- Awarded in 2018
- Collect data in the field in 2019

#### *Secondary Data Analysis using FoodAPS*

- 21 researchers doing secondary data analysis
- Ask the CDC researcher network who is already looking at the data

#### *Suggestions for FoodAPS2*

- If anyone has suggestions for new data to collect or also drop let USDA know
  - If they add anything they will likely have to drop something

### **ADJOURNMENT**

Meeting participants reconvened following the small group discussions. T. Phillips thanked the members for their thoughtful and robust engagement during the day, thanked CDC again for hosting the members, and adjourned the meeting.