

Meeting Summary

National Collaborative on Childhood Obesity Research (NCCOR)

Member Meeting

March 9, 2017
8:30 a.m.–4:00 p.m.

FHI 360
Academy Hall
Washington, DC

Livestream recordings: https://drive.google.com/drive/folders/0Bz_GNs-dPVZjbDgzRWE4cU1acEU

Participants: S. Arteaga, R. Ballard, D. Berrigan, K. Biala, M. Brna, L. Canady, L. Esposito, S. Fleishhacker, D. Galuska, S. George, T. Kauh, L. Kettel Khan, L. Nebeling, A. Oh, V. Osganian, T. Phillips, J. Reedy, A. Rosinger, A. Samuels, Y. Valdes, A. Vargas, J. Variyam, S. Yanovski, A. Yaroch

Atlanta: B. Belay, H. Blanck, E. Bradley, C. Dooyema, M. Harrison, K. Lee, A. Mrva, A. O'Connor, J. Omera, R. Petersen, E. Peterson, S. Silwa, K. Watson.

WELCOME AND INTRODUCTION

T. Phillips welcomed everyone to the meeting, including the group of participants joining virtually from Atlanta. This was the first time NCCOR hosted a co-located meeting to allow NCCOR members in Atlanta to participate. He noted that the theme of this NCCOR meeting is early childhood obesity research, reviewed the agenda, and asked participants to introduce themselves.

PROJECT UPDATES

Engaging Health Care Providers and Systems

B. Belay began his update by stating that the purpose and goals of the workgroup are to translate childhood obesity prevention research into clinical settings and to support linkages between health care providers and systems, public health, and communities by sharing best practices and evaluation strategies.

Based on the 2016 workshops, the workgroup decided to hold focus groups to determine, directly from stakeholders in the field, the need to support evaluation of clinically embedded and community-based childhood weight management programs (WMPs).

E. Arkin will moderate at least three virtual focus groups on evaluation of childhood WMPs beginning in late April or early May. The hope is to have feedback from the focus groups to report by this summer.

In response to a question about whether the workgroup is still looking for names of potential participants, B. Belay stated that they have contacted some of the partners, including American Academy of Pediatrics, and are hoping to have invitations ready by next week.

R. Ballard pointed out that many programs under the Affordable Care Act (ACA) were done because they were suggested or encouraged by the extension service or things like SNAP-Ed. She suggested identifying someone from USDA who might want to listen to some of these focus groups. USDA staff suggested included K. Scanlon, D. Toombs at NIFA, and P. Cotton, the new public health program leader at USDA.

Health, Behavioral Design, and the Built Environment

R. Ballard mentioned that the workgroup formed in February 2015. Since forming, the goals of the project have been to:

- Explore behavioral design as a concept and its application to healthier living
- Develop workshops to examine how innovation across relevant disciplines can contribute to progress in the field
- Design workshops to focus on the food and physical activity environment, with the goal of identifying behavioral design principles, applying them to active living and healthy eating strategies, and disseminating this knowledge to inform and improve research efforts

R. Ballard acknowledged J. Kimmons at CDC, stating that he has been a major force on the project. She also acknowledged the efforts of FHI 360 in bringing this to fruition.

In terms of activities, R. Ballard reported that the group held a series of workshops in November 2015 and an in-person meeting in spring 2016 involving the disciplines of design, architecture, and the behavioral economics of interventions. Today, the Health, Behavioral Design, and Built Environment Project White Paper was released on the NCCOR website, as well as a resource list on the workgroup page of the website. Through these products, the group seeks to generate more conversation in the field around these areas.

The group will promote the white paper and identify forums to interact with disciplines focused on design to learn more about their perspectives. The next step will be sponsoring a symposium at the Environmental Design Research Association 48th Annual Conference (EDRA48) in Wisconsin May/June 2017. The title of the symposium is *Healthy Places: Using Behavioral Design to Enhance Active Living and Healthy Eating*. J. Kimmons will open the symposium with a description of the white paper.

R. Ballard stated that the workgroup will be mostly quiet until after the symposium when there is more to report back.

S. Fleischhacker thanked J. Kimmons and R. Ballard and remarked that the white paper shows what NCCOR collaboration can accomplish. She then asked if the white paper will be highlighted in the newsletter. A. Samuels responded that it would and added that the executive summary of the white paper was included in the meeting handouts.

Participants discussed the possibility of putting together a list of investigators who have been funded by CDC, RWJF, and NIH who are in architecture and planning and design, and organizing a virtual focus group or another activity. R. Ballard suggested exploring that option after the symposium.

S. Fleischhacker added that there was an extensive Excel document put together for the workshop last year which could be a good starting point; it includes contact information for those researchers.

Youth Energy Expenditure

D. Berrigan began by reviewing the goals of the Youth Energy Expenditure workgroup:

- Achieve consensus on methods and measurements to improve energy expenditure estimates for youth
- Develop a plan for updating, reformatting, and making the Youth Compendium of Physical Activities more accessible

As part of the workgroup's activities, FHI 360 developed web pages to be hosted on the NCCOR website. The workgroup also submitted two manuscripts to journals: "Youth Compendium of Physical Activities: Activity Codes and Metabolic Intensities," submitted to *Medicine & Science in Sports & Exercise*; and "Energy Cost Expression for a Youth Compendium of Physical Activities," submitted to *Pediatric Exercise Science*. Both manuscripts are pending; the workgroup will not post them to the website until they have been published. In the interim, there are some ongoing activities:

- R. McMurray is providing guest lectures at the University of Iowa and the Miami University, Ohio.
- D. Berrigan recently presented at the Active Living Research Annual Conference in Clearwater Beach, Florida.
- K. Sprow, an MPH student at George Washington University, is extracting, standardizing units, and summarizing estimates of youth energy expenditure from the 2016 Journal of Physical Activity and Health (JPAH) supplement, which will provide 243 further estimates to be incorporated in version 2.0 of the Youth Compendium of Physical Activities.

D. Berrigan added that the most notable question at the Active Living Research Annual Conference was, "What's missing?" The biggest gap in the research is a measure of energy expenditure at work. Children who work are mostly older, but there is no measurement of youth doing work. Thus, it may be a topic that the workgroup seeks to promote.

The compendium includes measurements of children ages 6-18, but the discussion following the presentation focused on the possibility and challenges of measuring energy expenditure of children under age 6. A challenge is observing children in that age group doing any specific activity for a significant period. Two potential solutions raised were to measure structured or unstructured activity more generally for the age group or to use whole room calorimeters.

Other Updates

L. Kettel Khan informed everyone that the Healthy Food Initiatives workgroup, which has not had a workshop in almost two years, is looking to get together again. Participants can contact her if they are interested in participating.

MEASURES REGISTRY USER GUIDES

J. Reedy presented on the Measures Registry User Guides. The user guides were launched on February 21, 2017. They were supported by a two-year grant from The JPB Foundation, which formed a strategic alliance with NCCOR in 2015 to develop these guides and strengthen the Measures Registry, a landmark tool to help researchers find and select measures for childhood obesity research. The user guides cover the four domains of the Measures Registry: individual diet, food environment, individual physical activity, and physical activity environment. The user guides are designed to:

- 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

The user guides aim to foster more consistent use of measures, which will allow for standardization, meta-analysis, and synthesis.

J. Reedy acknowledged the authors of each of the four sections of the user guide as well as the individuals who offered feedback through the two expert panels on food and nutrition and physical activity. She also acknowledged the individuals on the project team for their roles in the user guide development process.

On the NCCOR website, the User Guide Homepage discusses the goals of the user guides and includes four clickable boxes that take users to each of the user guide domains. Everything is accessible through the website; there is also a printable PDF version of the content.

NCCOR is promoting the guides through the NCCOR e-newsletter, webinars, social media, member channels, and conferences throughout 2017. There will be two NCCOR webinars titled, *New NCCOR Measures Registry User Guides: Selecting the Best Measures*. The dates for the webinars follow:

- Food and Nutrition: March 29, 2017, at 2:00 p.m. ET
- Physical Activity: April 12, 2017, at 2:00 p.m. ET

As evidenced by website and social media metrics over the first two weeks of dissemination, the user guides are drawing a significant level of engagement.

J. Reedy reflected on lessons learned. The user guides development process tapped into a strong desire to advance measurement related to childhood obesity, the guides are deeper and richer than NCCOR imagined, and NCCOR has the potential to build on the energy generated by the user guides.

Participants discussed in detail the importance of seeking outreach and facilitating engagement with a variety of audiences and the steps that should be taken to do so:

- There is a strong need for these types of tools, so it's critical to think about a variety of users and how to solicit feedback and engage people.
- Over 20 different listservs are receiving emails about the user guides, and CDC has reached out to their grantees.
- The project team has reached out to SNAP-Education practitioners but is open to feedback about how to engage with other practitioners.
 - One suggestion is to promote the user guides through seminars and chronic disease journals.
- Guides were created through a researcher lens, so it's important to receive feedback from audiences besides researchers.
- A. Vargas suggested creating user guides for specific populations and for clinicians.
- D. Berrigan discussed that the team is planning to develop a curriculum package for instructors to use in community colleges and at the undergraduate level.
 - Participants suggested charging for the hands-on course and ensuring that charging for the course is allowed.
- The Engaging Health Care Providers and Systems project should ensure that focus group participants are made aware of the user guides.

In response to a question about how the team plans to evaluate the new registry, J. Reedy stated that they want to be sure to receive feedback from an audience broader than NCCOR. The NIH funding from the last evaluation is no longer available, so the team is looking at lower cost methods.

J. Reedy shared that JPB Foundation was pleased with the project. This was the first strategic alliance through NCCOR; participants would like to look at how to form strategic alliances with other funders in the future.

Participants discussed referencing the Measures Registry in funding opportunity announcements to build awareness among investigators about the resource.

AGENCY UPDATES

T. Phillips welcomed Steering Committee members to share updates about the JPB meeting and other topics.

L. Kettel Khan stated that the biggest update from CDC's perspective is that one of their major grantee programs, Racial and Ethnic Approaches to Community Health (REACH), has integrated into the Division of Nutrition, Physical Activity, and Obesity (DNPAO). She is hopeful that those staff will learn more about NCCOR, and NCCOR members will learn from them.

A. O'Connor from CDC commented that the REACH program has a focus on nutrition and physical activity, but it also addresses tobacco. The REACH program funds 49 grantees in communities throughout the country that have racial and health disparities. They are pleased to have the program with DNPAO.

L. Kettel Khan informed the group that Anne Schuchat is the acting director of CDC.

D. Galuska shared that CDC's Federal Food Service guidelines have been released. The guidelines are updates of those released 5 years ago. She also shared that, over the last couple days, they have received a visit from the 1,000 Days group, which looks at nutrition during the first 1,000 days of life. They were impressed by the group, and she suggested that they may be an interesting group for NCCOR to engage with in the future.

R. Ballard said that Dr. Francis Collins remains acting director for NIH. There have been three webinars already to discuss the National Nutrition Research Roadmap, and there will be another one at the end of May. The webinars are archived and can be accessed through the American Society for Nutrition. The two executive secretaries of the Roadmap, P. Starke-Reed from USDA and P. Coates from NIH, have asked agencies to provide input about whether they are using the report for their research or activities. This is the first time that NIH has developed a strategic plan for nutrition research, so input is encouraged from NCCOR members.

R. Ballard discussed NCCOR's process for creating strategic alliances. NCCOR has a set approach and template for developing a document for any strategic alliance that goes forward. This is separate from the NCCOR core members' Memorandum of Understanding. Strategic alliances can be formed with federal groups, professional organizations, or private foundations like JPB. JPB had an interest in helping with the development of the user guides.

The Steering Committee met with JPB last week to learn more about their current focus and interests and to talk about some ideas. They think NCCOR's work fits in their poverty focus area, and they are interested in health equity. The Steering Committee presented a couple ideas like an evaluation of the Healthy Food Financing Initiative. J. Variyam discussed the next phase of FoodAPS that USDA is moving forward with, and R. Ballard talked about the birth to 24-months expert group and several ideas in the

measures arena. JPB showed interest and will be contacting the Steering Committee about topics for collaboration.

R. Ballard clarified that NCCOR can also bring in partners without forming a full strategic alliance.

R. Ballard reminded the group that the Physical Activity Guidelines Committee will have its third meeting on March 23, 2017 at NIH, and members can listen online. Physical activity in children under 6 is one of the topics.

V. Osganian shared that they are in the process of planning a workshop on severe obesity in adolescents. The overarching theme will be a precision medicine approach. The dates are set for September 18 and 19 at the NIH campus.

S. Arteaga shared that the Healthy Communities study ended August 2016. Medical record data provided some of the interesting findings. The main outcome papers are under review, but she thinks it would be great to present at NCCOR in the future. In terms of strategic alliances, she suggested HRSA. HRSA has a lot going on in this area. Also, Secretary of Health and Human Services Thomas Price is interested in three things: opioids, serious mental illness, and childhood obesity. A. Oh, currently on detail at the Office of the Surgeon General, said they are getting more updates on what Secretary Price thinks about childhood obesity, and she will share what they find out.

L. Esposito said that the Eunice Kennedy Shriver National Institute for Child Health and Human Development has a new director, Dr. Diana Bianchi. She comes from Tufts University with a background in medical genetics, neonatal medicine, and pediatrics. L. Esposito shared a bit with her about NCCOR and told her that she should look for a senior leadership briefing at some point soon.

The National Cancer Institute will have a special theme issue on the Family Life, Activity, Sun, Health, and Eating (FLASHE) study released in print in June. The datasets are publicly available, along with all the questionnaires.

C. Pratt shared information about the Childhood Obesity Research Demonstration (CORD) and Childhood Obesity Prevention and Treatment Research (COPTR) projects. The Office of Disease Prevention (ODP) is offering an opportunity for the two groups to meet to think about next steps in childhood obesity research. She will let people know when she has the dates. The groups have looked at childhood obesity from 2 years old to 15 and older.

J. Variyam informed the group about the FoodAPS conducted in 2012-2013. In November, they released the public use files from the survey. The files are available through the USDA website (ers.usda.gov) along with some FAQs that are helpful to users. They are working on the statement of work for the second round of the survey and are pitching it to organizations like JPB. They want to generate age-based estimates, increase the sample size, and look at school-based meals in the second round. Another project with the Center for Nutrition Policy and Promotion looks to link scanner data of food purchases by households with USDA nutrition databases.

J. Guthrie thanked NCCOR for their support of the behavioral economics and healthy food choice research. The NCCOR workshop in 2016 sparked some dialogue that led to a meeting with state SNAP-Ed directors and administrators to discuss linking research to practice with SNAP-Ed. They are also planning for a panel discussion on a related topic this summer at the Society for Nutrition Education and Behaviors Annual Conference in Washington, DC. NCCOR's support provides an opportunity to make these positive steps forward.

T. Kauh shared that RWJF announced its new president, Dr. Richard Besser, who will start at the beginning of April. He was previously chief medical correspondent for ABC news and before that he was at CDC for 13 years.

RWJF is launching research activities related to sugar-sweetened beverages (SSBs) and healthy beverage consumption. If anyone has ideas or research topics related to influencing policy to reduce SSB consumption or increase water consumption, particularly for young children, they can let T. Kauh know.

CURRENT STATE OF EARLY CHILDHOOD OBESITY RESEARCH

R. Ballard, moderator for the discussion, introduced the topic for the presentations and introduced I. Paul as the first presenter.

Primary Prevention of Obesity Through Infancy-Based Interventions (Ian Paul)

I. Paul opened his presentation by discussing advancements in thinking about infant obesity over the past 15 years, stating that early interventions have grown. He then defended the importance of infancy-based interventions. Intervening during infancy can have a significant impact on lowering chronic disease risk because a significant percentage of 2- to 5-year-olds are already obese or overweight, and infancy is a period of both metabolic and behavioral plasticity.

One target for childhood obesity prevention is traditional feeding practices, which include habits like feeding infants in response to crying, providing large portions, and pressuring infants and children to eat. Traditional practices persist and can promote infant weight gain and increased obesity risk. Responsive feeding and parenting, which focuses on responding to a child's hunger cues and fostering the development of self-regulation of eating behaviors, was hypothesized to be an alternative that can reduce rapid weight gain and obesity risk. The Intervention Nurses Start Infants Growing on Healthy Trajectories (INSIGHT) study tests this hypothesis.

The INSIGHT study is a randomized, controlled trial that compares a responsive parenting group to a control group and analyzes the effects on infants from birth to 3 years old. Results show that infants in the responsive parenting group grew more slowly from birth to 28 weeks, and a smaller percentage were overweight. At age 2, a smaller percentage of infants in the responsive parenting group were overweight or obese compared to the control group. Responsive parenting group infants also had longer sleep duration at night and were more likely to have fruits and vegetables incorporated into their diets at 9 months.

The INSIGHT study looks exclusively at first-born children, but most parents report that their children are much different from each other. "SIBSIGHT," a follow-up study, will compare the second child to the first-born sibling. The hypothesis is that parent responsiveness will be improved for the second child and will be further enhanced by the INSIGHT intervention's responsive parenting approach.

The future directions and challenges of this research include showing efficacy in high-risk populations, widely disseminating "high-dose" interventions, and beginning interventions before conception with longer-term follow-up.

Using Systems Science to Engage Communities in Obesity Prevention (Christina Economos, Ross Hammond)

C. Economos started the presentation by stating that they are interested in taking effective interventions and bringing them to more people. She explained that Shape Up Somerville delivered a high dose to the children in the study, but an important component of the study was the formation of a steering committee that was instrumental in developing the current project. Missing in the literature is

how the committee plays an important role, diffuses information, and gets it to more people. The current research is a systems model that looks at the community of Somerville over time.

R. Hammond stated that this study—Childhood Obesity Modeling for Prevention and Community Transformation (COMPACT)—is an exemplar of a broader movement towards coordinated multifaceted strategies for prevention. This coordinated, systemic type of intervention was the focus of an Institute of Medicine report called Accelerating Progress in Obesity Prevention, and there have been calls for this type of research in high-profile journals. There is not consensus about the best way to approach these interventions, but there is emerging consensus around three pillars:

- A systems approach to a systemic problem
- Focus on the community level as the “sweet spot” for effective and sustainable change
- Tailoring or evidence-based general approach to highly heterogeneous local contexts and implementation challenges

Systems science offers potential advantages for meeting the challenge of multifaceted, tailored interventions because it operationalizes theory and knowledge in the field while maintaining conceptual richness. It allows for thinking about social context, application of mathematical models, and consideration of time and adaptation. This method is increasingly used in other areas of public health and social policy.

The COMPACT study tries to answer the questions of why whole-of-community prevention interventions succeed or fail and how to transfer a structure that works in one context to another. What aspects of community structure or starting point might affect implementation and how can the study be tailored? What data are need? And how do the dynamics play out and in what time frame?

The approach in COMPACT is iterative, whereby they developed a conceptual theory centered around a steering committee, embodied that theory in a mathematical model, and then applied the model to real contexts. Finally, they refined the model.

C. Economos discussed five aspects of the study:

- A systematic review of other whole-of-community interventions
 - Found only 11 studies that rigorously engaged the community
- Learning from a successful, completed whole-of-community intervention through the Shape Up Somerville Retrospective Study
 - Collected data from original 25 steering committee members
 - Developed a new tool to capture knowledge, engagement, and social networks
- A new study called Shape Up Under 5 which focuses on children ages 0-5 years
 - Committee of 16 early childhood leaders convened over 20-month period
 - Upstream approach that is systems science driven
- Understand and leverage existing community systems (steering committee) to implement an upstream approach to obesity prevention
- Develop more cost-efficient and effective strategies for interventions

Group Model Building (GMB) was the method used for engaging the community. GMB is grounded in system dynamics involving community stakeholders and is a process of externalizing mental models. The committee built a model together that shows how each member connects to the system of promoting healthy weight in early childhood. Through an iterative process, they then built a unified message—“Eat, Sleep, Play”—to diffuse throughout their social networks.

The key takeaways are:

- Facilitation tools and intervention measurements add rigor to work of community groups.
- Upstream interventions may have measurable and important midstream or downstream effects.
- Increased knowledge and engagement of committee members can extend to the community.
- Replicability and cost-effectiveness can inform similar interventions to scale up.

Physical Activity Interventions in Preschool-Age Children (Sofiya Alhassan)

S. Alhassan began her presentation with the background that most preschoolers do not meet the physical activity recommendation of 60 minutes per day. Furthermore, most of their daily physical activity is light rather than moderate to vigorous physical activity (MVPA). Interventions to improve preschoolers' physical activity levels have had mixed results. Successful strategies have included structured activity, use of theory in intervention design, and delivery of intervention by experts or external staff. However, physical activity changes are not sustainable once experts or researchers leave. To increase sustainability, interventions must be led by teachers or staff.

S. Alhassan then reviewed two of her interventions, one unsuccessful and the other successful. The first intervention, **Reality on the (Play) Ground**, examined the effects of short bouts (10 minutes) of structured physical activity at the beginning of a designated gross motor playtime period. For the intervention group, teachers were given DVDs with structured routines to lead their preschoolers in during the first 10 minutes of gross motor playtime. The remaining 20 minutes were left for supervised free playtime. The control group participated in 30 minutes of unstructured, supervised free time.

The results were that the short bout of physical activity improved directly observed physical activity, but it had no effect on the accelerometer MVPA. The evaluations showed that the unstructured play time control groups were more likely to implement at least 30 minutes of unstructured physical activity. In the follow-up study (12 months post intervention), 4 of the 16 childcare centers were still implementing the DVD routines but not in the intended manner. Teachers were not participating with children and were using the DVD in 5-minute durations without much consistency.

Teachers reported that the DVD was something extra for them to do that they did not have time for. They would have preferred an activity that was integrated into lesson plans and that met learning standards.

The second intervention, **Physical Activity, Diet, and Sleep (PADS)**, examined the impact of incorporating healthy behaviors into Massachusetts early learning standards on preschoolers' physical activity level. Using PADS materials, teachers could teach content related to Massachusetts learning standards while increasing physical activity.

The results showed that the PADS intervention decreased sedentary time during preschool hours, and it was effective in increasing time spent in MVPA during the preschool day and total day. The conclusion is that the intervention was more effective because it placed less demand on teacher's time.

S. Alhassan concluded by discussing some important issues to think about regarding preschool physical activity. First, childcare centers influence parents and can act as advocates for physical activity. Second, most childcare centers have physical activity policies, but they can be improved. Interventions need to look at how to train and support staff to enhance physical activity.

Researchers need to look at how play area designs can help optimize physical activity and how sedentary activities can be made more active. There's also a need to examine the balance between unstructured and structured playtime, determining which results in the greatest amount of physical

activity. Finally, it's critical to look at how to more effectively and directly engage parents, many of whom want to help their child be more active but don't have much time.

Discussion

In response to questions about age-appropriate foods and sequencing of foods, I. Paul stated:

- The recent RWJF study does address solid foods, but there is not a huge evidence base to support specific foods. In the INSIGHT interventions, they give specific advice to parents about how and when to introduce certain foods, but that information isn't publicly available yet.
- A set of dietary guidelines from birth to 24 months will be coming out as part of the 2020 Dietary Guidelines for Americans.
- In terms of sequencing, there are hypotheses but not much evidence yet. One recent study called for starting with bitter green vegetables before incorporating other fruits and vegetables. Others say that meats should be the first complementary food because of their high zinc and iron contents.

In response to a question about what one should look to if they want to replicate an intervention similar to the COMPACT study and scale it up, R. Hammond responded:

- A theoretical framework and a model that makes quantitative estimates guide understanding of what matters and how it matters in an intervention.
- The model becomes a tool that implementers can use when entering a new community.
- The model is tailored to specific community contexts by inputting the specific characteristics of the community into the model.

R. Ballard explained that when people hear about modeling or systems science, they tend to think that it is theory without data. It's critically important that continually evolving data are part of what updates the modeling estimates. R. Hammond remarked that theory without data is dangerous just as data without theory are dangerous. The updating of both the model and the data are an iterative process that inform each other.

In response to a question about whether the types of calls for systems science research have thought of the network analysis that has been conducted with the COMPACT study, R. Hammond and C. Economos commented:

- Networks science is a form of systems science, but their research is using networks as the basis for a dynamic model, which is not common in this field.
- The project incorporates different types of systems science for different purposes. One can't diffuse unless there is a network to diffuse information. Group modeling has been used a lot but not in this field, and the calls for systems science research in the field have not lent themselves to agent-based modeling, social networks, and group-based modeling all together. They are usually separated.
- Community members becoming citizen scientists is the direction that the field should move towards.

FUTURE DIRECTIONS IN EARLY CHILDHOOD OBESITY RESEARCH DISCUSSION (DIANNE STANTON WARD, ALLISON GERTEL-ROSENBERG, MATTHEW GILMAN)

After an introduction to the discussion by L. Kettel Khan, panelists introduced themselves.

Panelists were asked to respond to questions on where we are in the field of early childhood obesity research and where we are going.

The first question was: The 2011 Consensus discussions identified 24 research priorities related to measurement of individual behaviors, policy, environments, and capacity building. What progress has been made on the priorities?

- D. Stanton Ward responded that in terms of gains, the field can measure physical activity in preschoolers using objective monitoring and observational systems. In terms of diet, a recent study from Newcastle presented visual identification of foods on plates of preschoolers with a vast array of quantities and content. Additional progress will be made with pictorials in eating situations that can be more easily assessed than before. Physical activity has soared because of objective monitoring availability, but in the infant and toddler group there has been less progress. One challenge has been the inability to identify patterns of carrying rather than self-propelled movement.
- A. Gertel-Rosenberg remarked that her work focuses on systems and environment-level changes that impact kids' ability to access physical activity and nutritional food. The Early Care and Education Learning Collaboration has led to structures and initiatives. They have started to explore family childcare but haven't broken through on unlicensed care. Children in unlicensed care are most in need, so they are continuing to look at that.

M. Gilman presented some thoughts on future directions in early childhood obesity intervention research and posed some questions for the group. If the goal is to moderate gain in adiposity, and we know it is hard to measure diet and physical activity, especially among infants, how much does better measurement of behaviors matter? Relatedly, how much does specific diet or activity advice matter? The group discussed his two questions and other thoughts on the broader issues:

- One caution is that we can't draw conclusions that the specific diet doesn't matter because there are specifics, such as focus on calorie deficit, that are a common characteristic of successful dietary approaches.
- We can conclude that there is high variability in human response, so we must get more tailored and not less. We need better ways to measure people's responses.
- Going back to I. Paul's idea of his two kids having different responses, different people have different reactions to diets.
- As a group, we need to think about what we do with the data from the measurements between studies. Does anybody have thoughts in that area for moving the field forward? What voices do you hear from the field?
- COPTR trials are currently in the field with two prevention and two treatment studies. They are trying to orchestrate common elements across those studies. From experiences from multi-center studies, we will get models that will allow us to come together. We have requests from Europe and Canada to share data across childcare sites. We are going to have more interest in larger datasets and aggregate datasets to understand impact. Research doesn't matter if we can't take that information and put it into practice; the right interventions and implementation are important.
- In intervention and population studies, we look for feasible, manageable, and not too costly measurements. Observational studies and intervention studies need to learn from each other;

there needs to be cross-talk. The younger you go the harder it is for physical activity and diet studies. Infants are probably the biggest need right now.

- It also depends on which audience you are talking to. Science needs to make sure we are answering the important questions. Practitioners want to know how cheaply, how many kids you are going to reach, change in BMI by X%, eating X amount of this. This is a constant struggle between right measures for validity and moving forward and showing that change is happening for practitioners as well as how we can do so in a low-cost manner.
- We need good interventions and better measurements. One without the other doesn't work. The question is not how much do better measurements matter? The answer is you need good interventions and better measurements for them.
- We talk about going from intervention to behavior change to health outcome. If health outcome isn't improved, how much time and effort do we have to spend measuring the behavior?
- A measure of adherence to an intervention is maybe more predictive than the measures of whether individuals came to the sessions.
- Adherence is one type of measure of implementation success. The work that C. Economos and R. Hammond are doing says that there are measures of implementation success that are farther upstream—in this case, at the community level and not at the individual level.
- Sustainability is critical. When there is capacity-building, something is more likely to be sustained. Farther downstream interventions are dealing with an individual who might leave. That's why culture and community can go a long way.
- Children are strongly influenced by their parents and the community, which raises the significance.
- Taking evidence to scale, there are tests of efficacy and tests of effectiveness. The test of efficacy is analogous to the federal government's focus on evidence-based policy. But something can be evidence-based and not work in the real world. That distinction deserves investigation, too. Adaptive intervention was discussed, but at what point does one adapt so much that it is no longer the evidence-based treatment?
- One way to think about adaptive trial design is to think about the dynamism of the system. If the system is changing, then what one does in the system will also have to change to be effective.
- Phased implementations allow for mapping of the process on the front end to adapt implementation strategy and then use smart design to have iterations of that.

The group discussed D. Berrigan's question: Are there specific gaps in our surveillance of physical activity and diet in young age groups, and are there existing instruments of measurement that can be used?

- CDC has had a period of planning to build surveillance systems in early care settings. They had a panel in 2015 to start some of the legwork. They are continuing to process that.
- There is a move to incorporate more individual measures at pregnancy, infancy, and early childhood as part of the birth-to-24 months workgroup. Doing mother-child dyads is not feasible.
- We tend to focus on small sections of all the groups that influence the child's life. The systems that support the kids are different depending on where you are. How do we put surveillance systems together that cut across different sectors and agencies? In Florida, there is a county-level Quality Rating and Improvement System, but not a state-level system. How do we take that into consideration when we build these surveillance systems?
- If we look at childcare as a community sublevel, it's possible to try to influence that community. There are many players at the table in childcare, but we haven't figured out how to work together. The childcare network can be leveraged.

M. Gilman commented that one premise of our discussion is that there have been a lot of interventions on early childhood obesity that have not been successful. At the same time, we have seen a decrease in obesity rates in preschoolers. How can it be that most of our interventions are unsuccessful and yet we are seeing a decrease?

M. Gilman shared his work on the Environmental Influences on Child Health Outcomes (ECHO) initiative, a nationwide program run out of the Office of the Director, NIH, that involves observation and intervention. The intervention side has 17 sites around the country in states that have historically low rates of NIH funding. The goal is to offer opportunities and access for children from rural and medically underserved areas to participate in clinical trials. The initiative's steering committee is considering what trials they might institute as they build capacity. Obesity is one of the five focus areas of ECHO, so there could be some ideas out of this group that could drive some of the science.

- R. Ballard suggested that M. Gilman use the NCCOR webinars to present a specific aspect of ECHO.

L. Kettel Khan explained that NCCOR is a multiagency collaboration, so one of its primary roles is to convene people. If anyone sees a need to convene for a topic at the workshop level (50 people or less), it is a possibility. There are multiple products that NCCOR can help with as well.

The group discussed the following questions: What is needed in terms of translation and dissemination of best practices such as using childcare programs as an access point to create linkages to families, pediatricians, and the health care community? And what can NCCOR help you do?

- We haven't figured out how to engage parents in early childcare settings. We haven't figured out how to leverage this organizational setting to engage with families. Advances have come about through the different agencies, but there isn't as much cross-talk as there could be. NCCOR could start to put some of those things together.
- Providers of early childcare have asked us to get our act together before coming to them. A lot of these childcare centers are under resourced and underpaid, and staff have some of the same risk factors that the kids they are serving face. Providing resources and tools so that they can implement policy changes is important, and this needs to be done in a way that doesn't force childcare centers underground (unlicensed). In terms of the convening function, how do we go to these places with a collective package? And how do we give advice that is consistent across different networks? We need to look at the consumer approach.
- It would be useful to talk to stakeholders about incentives for licensing or seeking licensure. The childcare food program in many states acts as an incentive because it provides funds. How do we make their lives easier and not harder? NCCOR should try to engage non-public health actors to better understand what their needs are.
- Thinking about NCCOR support for workshops, one theme coming out of COMPACT is that both capacity-building in communities and generalizable knowledge are important. How can we engage and partner and give back to participants and develop generalized knowledge? How can we do both?
- The other idea is that individual-level interventions aren't as successful as we'd like them to be and yet we are seeing changes at the surveillance level. How can we put those together? What data do we need to understand that? These two themes might be of interest for NCCOR partners.

There are communities of identity and communities of place. They are two different mechanisms but both are important for scale. There could be a small workshop of people who formally communicate the importance of those two types of community for people not in the field.

EMERGING OPPORTUNITIES

T. Phillips welcomed participants to share any ideas or proposals that they have for NCCOR meetings, workshops, or workgroups.

D. Young Hyman introduced a new workgroup. The idea is to take the evidence in the field, all the studies conducted over the last 10 years or so, to produce a new methodology for data harmonization. The group will take studies conducted in different settings and disaggregate interventions to develop modeling to provide a tool for researchers, policy implementers, policy developers, and program implementers. RWJF and the NIH Office of Behavioral and Social Sciences Research (OBSSR) already have a collaboration for a proof of concept project, but they need a scientific advisory board. The advisory board will hone in on the area of interest, help the modeling people know how to code components, and vet the product on the other end. She invited anybody interested to join this group.

K. Watson at CDC provided a summary of the physical activity workgroup. The last member meeting was focused on physical activity, and participants brainstormed physical activity topics that NCCOR could pursue. In small groups, they narrowed down the topic areas to surveillance, research, and evaluation. After the meeting at CDC, the Physical Activity and Health Branch has thought about the topics, and they have three ideas that they would like to discuss in the workgroup.

L. Kettel Khan reiterated that the Healthy Food Incentives workgroup is thinking about reconvening. They will connect with the original group, but if others are interested, they can reach out to her. They will reconvene within the next couple months. They will be looking at financial incentives or other promotional nudges to improve healthy food purchasing patterns in retail settings.

T. Phillips adjourned the member meeting and informed participants of the small group session topics.

SMALL GROUP SESSIONS

Measures Registry

Participants: D. Berrigan, J. Reedy, A. Samuels, A. Vargas

- The group discussed packaging the tool for the target audiences: clinicians, researchers, teachers, and practitioners. One strategy is to have fact sheets for each audience; which would include a case study relevant to specific audiences.
- J. Reedy will be presenting the tool at the Experimental Biology Annual Meeting.
- The group will plan to submit an abstract for the Food and Nutrition Conference and Expo 2018 in Washington, DC.
 - Workshops like the Active Living Research workshops are another possibility.
 - Next call, they will look at other long-term opportunities besides FNCE.
- The members would like to offer university and community college instructors and students a paid half-day module on the Measures Registry.
 - The next step is to determine the rules for charging for the module.
 - They could host a module at the BEAT (Built Environment Assessment Training) Institute.
- A. Samuels will explore how to make the user guides appear in Google Scholar.
- D. Berrigan suggested contacting Karin Pfeiffer, who is part of the Youth Energy Expenditure group, and Loretta DiPietro at George Washington University.
- J. Reedy suggested going back to the expert panels with a set of structured questions.
- The group will look at printing some additional guides with funding from CDC or NIH.

Physical Activity

Participants: R. Ballard, M. Brna, S. George, J. Omera, E. Ussery, Y. Valdes, K. Watson, J. Whitefield

- The group presented and discussed proposals, and identified potential partners for physical activity initiatives.
- **Surveillance Data (E. Ussery)**
 - This proposal focuses on identifying gaps and developing measurement standards for using Safe Routes.
 - Next steps:
 - Contact T. Kauh to see if there's someone from RWJF that wants to be involved.
 - Conduct a literature review—include research into what strategies incorporated into SNAP-Ed might be applicable; and interview people who have created surveillance systems.
 - Assemble a workgroup through the NCCOR Coordinating Center.
 - Organize a panel of subject matter experts to identify behaviors, features of a built environment, and policies and programs that focus on youth walking or biking to school to identify what levels would be appropriate.
- **Additional Benefits of Walkability (J. Omera)**
 - This proposal is based on the Surgeon General's Call to Action which highlights four benefits of walkability to the community. This initiative will focus on two of the four; economic benefits will not be considered since they have been explored in other studies.
 - Additional benefits to be explored are safety, air quality, and social cohesion/support. There is a need to identify, assess, and quantify these additional benefits through evaluation efforts.
 - Next steps:
 - Discuss relevant NCCOR activities.
 - Select two of the four benefits of walkability.
 - Conduct a literature review.
 - Refer to the Youth Energy Expenditure Compendium as a model—panel, workshop, paper.
 - Determine measures and the process for quantifying.
 - Organize a panel of subject matter experts to summarize and review evidence of two additional benefits. S. George and R. Ballard will put together a list of potential people to contact.
 - Publish a manuscript based on the literature review and panel findings.
- **Moving Youth Physical Activity from Dissemination to Implementation (T. Schmidt)**
 - This proposal is written but not as developed as the former two. Rather it is an extension of what has been done previously.
 - There is overlap with RWJF and parks, and NCCOR might be able to facilitate development—T. Kauh has talked about supporting this effort. RWJF has a limited number of staff who can participate in these types of activities, but bringing in outside experts is a possibility (e.g., David Brown).
 - Next steps:
 - Conduct a literature review.
 - Develop and administer a mapping survey.
 - Convene an advisory panel to review the mapping survey.

- **Group action items:**
 - Update and distribute NCCOR's pathway to projects infographic, outlining steps for submitting new proposals
 - Proposal leads to submit proposal drafts to R. Ballard and S. George
 - Arrange a call for mid-April after identifying FHI 360 coordinator
 - Reach out to NIH staff to see who may be interested in getting involved; prepare to discuss at the next monthly Steering Committee meeting