

**National Collaborative on Childhood Obesity Research (NCCOR)**  
**Evaluating Clinical-Community Engagement Models:**  
**What Works and What Doesn't**

**November 9, 2015 | 8:15 a.m. – 5 p.m.**  
**November 10, 2015 | 8:30 a.m. – 1:30 p.m.**

**Participants**

*Guests:* Sarah C. Armstrong, Raymond J. Baxter, Carlye Burd, Heidi F. Burke, Rhonda Ford Chatmon, Stephen Cook, Deborah Deatricks, William H. Dietz, Ihuoma Eneli, Ashley Fitch, Darcy A. Freedman, Leah Frerichs, Megan E. Gorby, Mark Hyman, Daniel Kidder, Valerie A. Lawson, Shari Nethersole, Holly Nicaastro, Stephen Pont, Thomas N. Robinson, Victoria W. Rogers, Pamela Schwartz, Nancy E. Sherwood, Emma Sirois, Bronwyn Starr, William Stratbucker, Annie Thornhill, Joey Vaughan, Nancy Wiener Fishman, Maggie Wilson, Bill Winfrey, Shale L. Wong

*NCCOR Members:* Elaine Arkin, Rachel Ballard, Brook Belay, Janet M. de Jesus, Saleia Afele Faamuli, Alyson B. Goodman, Robert J. Kuczmarski, Jerold R. Mande, Susan Yanovski, Deborah Young-Hyman

**Background**

The goal of the Engaging Health Care Providers and Systems workgroup of the National Collaborative on Childhood Obesity Research (NCCOR) is to gather findings from research that can be translated into and used in clinical and community settings.

As part of this effort, the workgroup identified examples of partnership and engagement between health care settings and communities to address obesity prevention and control, identify gaps and opportunities, and recommend strategies and metrics for evaluation of these engagement models. The workgroup convened this workshop, sponsored and led by NCCOR.

**Workshop Objectives**

- Describe the strategies used by community engagement programs and models that enable health care and communities to collaborate to address childhood obesity;
- Describe the degree to which current efforts have undergone evaluations, including process measures, metrics, or indicators that have been used;
- Identify the value that a model provides for stakeholders and leaders (e.g., community or employee health impact) and funders (e.g., organization mission);
- Develop an evaluation framework that can be used to motivate program developers, stakeholders, and funders; and
- Provide recommendations to enhance future research and dissemination strategies by:

- Reviewing the current evidence base and identifying best practices and gaps;
- Determining metrics suitable for evaluating models and programs;
- Designing an evaluation framework to further guide evaluation methods and metrics; and
- Proposing strategies for broad-scale development and dissemination of effective programs and models.

## DAY 1

### Overview and Introductions

**Elaine Arkin**, *National Collaborative on Childhood Obesity Research (NCCOR)*

Speakers will discuss various health care-community engagement programs, including those on healthy eating and active living, following a format that describes the population served, what strategies worked and what did not, and what outcomes were pursued. This will allow for comparison of similarities and differences, particularly relating to strategies and evaluation efforts between programs and models. Key questions include:

- What are the more successful and less successful strategies?
- What is the reach and implementation fidelity of the program and/or model?
- What dose would be effective?
- What are the current evaluation methods and metrics?
- What is known about the program's effectiveness, replicability (i.e., how easy is it to incorporate into a new community), and sustainability?

Speakers will share their current evaluation efforts and data to describe what is known about effectiveness (process *and* health outcomes) and how that influences decision making in these engagement models. We'll further discuss available data and which data are critical for evaluation, the benefits and limitations of current measures, and gaps and opportunities.

### Welcome – Purpose of Workshop and NCCOR Goals

**Brook Belay, MD, MPH**, *Medical Officer, Obesity Prevention and Control Branch, Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC)*

**Susan Yanovski, MD**, *Co-Director, Office of Obesity Research, Division of Digestive Diseases and Nutrition, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health (NIH)*

Dr. Belay set the stage by defining some terms that would be discussed—community health, community health needs assessments, and community health improvement projects.

Dr. Yanovski reviewed the workshop goals and discussed the need for evaluation of new programs and policies implemented in health care settings and communities. All have costs, both financial and opportunity, and it is essential to determine which are most effective to allow us to target limited resources.

**Keynote: A New Model for Integrating Clinical-Community Systems and Tackling Obesity**  
*William H. Dietz, MD, PhD, Director, Sumner M. Redstone Global Center for Prevention and Wellness, Milken Institute School of Public Health, The George Washington University*

The Triple Bottom Line—developed by Don Berwick and colleagues—aims to improve patient experience, improve population health, and reduce cost of care. This framework needs to drive decisions about work in care delivery system.

Work in the care delivery system began with the chronic care model, looking at how and who actually delivers care, with a focus on self-management support. Self-management support is one element of care delivery that leads to improved patient outcomes. Community involvement is not well defined in this model, and it is still a volume-based vs. quality-based system.

Then came chronic care model #2, which included centralized family/patient self-management. Environment is included in this model, but the environment and medical system are still seen as two parallel entities; it is a siloed model of care.

The IOM Roundtable on Obesity Solutions focused on revising this framework (see Dietz et al., *Health Affairs* 2015;9:1456-1463). This model adds the understanding of the local patient environment and the challenges patients face in that environment when they try to make changes, such as being more physically active or eating healthier. It also take into account population health, which recognizes that federal and state-level legislation has an impact on this model, along with training and education and health equity, acknowledging factors that are not being addressed.

We are talking about the outer rings of socioecological model—federal/state government, community systems (such as early care and education, worksites, YMCAs, parks and recreation), institutions.

One key in this model is an integration function that connects community systems to clinical systems. Leadership is a foundational function of the integrator and must come from an entity that is trusted by social systems and clinical systems. As we move to this model, trust is critical to implementation of all these elements. Given the required characteristics of the integrator, there are a limited number of sources that can fill this role.

Partnerships are essential—and partners must have shared goals and values. How do we collect local data to make decisions needed in this system? Governance is also important; communities and clinical systems must trust those making decisions. Sustainable payment is another critical factor. How do health care systems that have the income support community efforts? And metrics are vital—the same metrics that establish baseline can be used to show what works.

Health systems need to become advocates for the community side, to move beyond the medical system. Electronic medical records (EMRs) are one area to look at, to determine how bi-directional communication and referrals can occur. Changes are required on the EMR side.

Examples of elements within the framework:

- YMCA Community Diabetes Prevention Program is a good example of how a community system informs primary care providers. This program represents value-based care: Providers of the program are not reimbursed unless participants meet certain attendance and weight loss goals.
- HealtheRx, in Southside Chicago, shows how community resources can be linked to providers. In a survey for nutrition, physical activity, and other resources, about one-third of places that were supposed to be there no longer were, and another third of places that were new were not included. These resources were entered into the EMR so patients identified with overweight and obesity could be easily linked with these resources.
- Kaiser HEAL (Healthy Eating Active Living) program has made substantial changes in investments, such as in schools and other systems.
- St. Croix Valley (MN/WI) Health Partners has partnered with a local foundation and about 12 different organizations. A critical element is that the partners have committed to working in this area for 10 years, giving the community confidence that changes will occur. The focus is on childhood obesity, among children in elementary school.

These programs that engage broader community systems are likely to address the population health piece. But how do they affect cost? In an April 2015 report, the New York Department of Health laid out value-based payment that rewards providers who deliver high-value care through emphasizing prevention, coordination, and optimal patient outcomes, including

interventions that address underlying social determinants of health. In this report, NY said they would reimburse 10 services; about 8 of them were related to obesity.

How do we assess the return on investment on childhood obesity treatment? In the Childhood Obesity Cost Effectiveness Study (CHOICES) project, led by Steve Gortmaker and colleagues, the outcome is the cost per unit of BMI change.

In the community benefits initiative, the IRS rules endorse community benefit investments that address social, behavioral, and environmental factors that influence community health. Seventy percent of the investments prioritized obesity. What communities are doing is stated in very general terms, but it is still a promising mechanism for reimbursement

There are several challenges and elements of sustainable funding mechanism to consider—

- We need to establish a mechanism to share risks and savings and benefits for reimbursement. Savings are accrued to the medical side—how do they get returned to the community side?
- Childhood obesity initiatives need to engage both the child and parent. Programs have shown that adults of children who lost weight also lost 5-10% of their body weight. This makes argument for family-based programs vs. individual-/child-based.
- Braided funding, which involves multiple funding streams and careful accounting for each stream, is needed. The Center for Medicare & Medicare Innovation (CMMI) is considering whether funding for Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program, and early intervention centers can be braided for care of childhood obesity.
- We lack a mechanism for funding certainty and continuity. Interim funding from foundations is not going to bring the change needed.
- Reimbursement for providers is considered a barrier to care improvement. There has been a benefit available in a clinical setting, but it has not really been used. One barrier might be awareness. Another is that co-pays were too high and applied over a lengthy period of time, which is a disincentive for participation. Lack of self-efficacy by providers and bias may also come into play.
- The role of hospitals and health care systems is underappreciated in setting the example. Hospitals led the way in changing social norms regarding smoking. The same is starting to occur with sugary drinks. Not only are hospitals modeling behavior we want others to do, but the earned media hospitals accrue helps to change social norms.

- Training for providers is needed to function in this new system. The Institute of Medicine (IOM) convened a collaborative of 16 organizations (e.g., American Academy of Pediatrics [AAP], physical therapists, dietitians) to identify core competencies. Physical activity/obesity was not represented. The goal is to develop a toolkit (or kits) that begins to identify these competencies relevant to obesity prevention and control. Examples might include:
  - Appropriate screening practices and tools
  - People-first language for obesity and addressing bias and stigma
  - Behavior change strategies
  - Ability to work within teams and with other teams
  - Use of information technology
  - Ability to work across clinical and community sectors
  - Alignment of clinical services with severity of obesity (patients with severe obesity need a big emphasis on clinical care; community services can support and sustain weight loss)

We do not have examples of a truly integrated model, but we have examples of elements of it, which show how an integrated system might work and how we might achieve and sustain less expensive interventions.

## **Q&A**

With the Affordable Care Act (ACA) provision and expansion, a record low number of children are now uncovered. The pediatric medical home is key, as is involving parents in the process, if we are going to see a real difference in health outcomes.

Mark Hyman, Cleveland Clinic – What are examples of how clinical medicine and community health engagements have been working?

Dr. Dietz – The four examples he gave are the only ones he knows of. He also noted Health Leads, in which students who are aware of community resources sit outside the clinic office, so someone who needs those services can find them. This is not really an integrated model, just a strategy to improve access.

Dr. Hyman – How is the Kaiser Permanente (KP) program working?

Dr. Raymond Baxter, KP – This work is at an inflection point. They have invested 10 years building community-based collaboratives, run side-by-side with clinical programs, with BMI and physical activity as vital signs. They are now bringing these two assets together. The challenge is how do we move information between sectors? How do we move community-based programs

to individuals and families? For instance, can we scale up the Health Leads model in a way that tackles the systems challenges?

### **Model 1: Community Engagement at the Clinic Level**

Description: This panel explored clinic programs with community engagement components and looked at evaluation metrics involved.

**Moderator: Thomas N. Robinson, MD, MPH, Irving Schulman, MD Endowed Professor in Child Health and Professor of Pediatrics and of Medicine, Division of General Pediatrics and the Stanford Prevention Research Center, Stanford University School of Medicine and Director, Center for Healthy Weight, Stanford University and Lucile Packard Children's Hospital Stanford**

**Darcy A. Freedman, PhD, MPH, Associate Director, Prevention Research Center for Healthy Neighborhoods and Associate Professor, Epidemiology, Biostatistics, and Social Work, Case Western Reserve University**

Right Choice Fresh Start farmers market is run by the University of South Carolina and the Federally Qualified Health Center in Orangeburg, SC. The project was implemented through the USC Cancer Prevention and Control Network, funded by CDC.

#### *Study context*

When the project started in 2009, prevalence of obesity was high (about 25%) among the large patient population. The patient population had a lower household median income compared with the state.

#### *Project goals:*

- Increase access to produce among patients at the health center.
- Improve diet among adults and children in community.
- Increase demand for local farmers' products—not a direct relationship to health, but economic opportunity is important from a social determinants perspective.

#### *Among the successful strategies:*

- Conducting evaluation – Engaging the community to answer the question, what will the health center-based market do for us? And conducting customer and farmer satisfaction surveys.
- Organized by advisory council of community members.
- Seeking additional sources of funding. The health center now has funding for the project from USDA, SC Cancer Alliance, and other sources.

- Using a logic model based on the Multicomponent Nutritious Food Access Framework to guide their activity.
- Focusing on systems change.

#### *Less successful strategies*

- University researchers overstepping their bounds in innovating, rather than empowering the community health center to lead. For instance, USC and the health center both developed a produce prescription program; the health center version was much more effective.

#### *Reach and dose*

Reach was difficult to capture. According to the enrollment forms, 54% of participants were from the health center, but the market also helped others in the community. About 9 out of 10 of the people enrolled were African American women. About 4 out of 10 had children in the household. They used a receipt program to record each transaction; they had about 7,000 sales receipts.

People who shopped at the market more often were more likely to improve fruit and vegetable consumption. They saw a dose response relationship, but need more research to know what does is most effective.

#### *Evaluation methods and metrics*

One, single evaluation is not effective. Evaluation is a circular process. It is important to not only decide what and how to measure, but how to feed data back to stakeholders—to the health center, university, the farmers who supplied the market. Metrics are at individual, interpersonal, and organizational levels. Multiple metrics are important to capture fully what you want to know. The advisory council was very helpful in this process. For instance, the project conducted a dot survey at the market each month. The advisory council picked three questions each month, and people voted with their dots.

#### *Replicability and sustainability*

The project created a documentary film to show why the market was established, which was shown to the community. The video, *Planting Healthy Roots*, won an award from the Society for Community Research in Action. The project also created a manual that recorded the process used to develop the farmers market, which serves as a model for how to engage the community in the process.



The results of the project helped to influence state legislation to establish a fruit and vegetable coupon program for SNAP recipients. Because of the partnerships formed, they could quickly relay data to the right advocates. This problem is way too big for any one system to handle—we must understand that our part is only one part and figure out how to pass on our data so others can use it.

**Stephen Pont, MD, MPH**, *Assistant Professor of Pediatrics, UT-Austin Dell Medical School and Medical Director, Texas Center for the Prevention and Treatment of Childhood Obesity, Dell Children’s Medical Center of Central Texas*

#### *Project overview and goal*

Texas Childhood Obesity Research Demonstration Project (Texas CORd) is applying efforts at multiple levels in multiple sectors concurrently to address childhood obesity. It is a broader community-based intervention involving school districts, public health, health care, child care provider sites, home and family.

The main focus was creating healthier communities for low-income children, and determining how to better link and better support efforts. The researchers began with looking at any site that kids ages 2-12 might interact with.

#### *Study approach*

The nested study involved a primary intervention engaging early childhood education; elementary schools; policy, systems, and environment; and health care. Children in the intervention group were then referred by health care sites using random design to either a secondary intervention (Next Steps) or to a control group that received just an informational booklet.

In the primary prevention intervention, components included coordinated health programs in pre-K and Head Start sites and elementary schools; electronic health records changes and training and education in health clinics; and at the community level, a community advisory committee, Your Health Matters: Growing Healthy, Active Communities program from the Texas Department of State Health Services (DSHS) social media campaign, and social media encouraging community members to be advocates for change.

Children and families in the Next Steps secondary prevention intervention were assigned a community health worker and participate in the 10-week Mend program, followed by a 9-month post program. Text messaging was used to reach people between visits. The Mend

program is a family-based group program focused on nutrition and physical activity. The transitional program that followed took place in community sports programs, such as YMCAs.

As part of the study, researchers developed [Next Steps: A Practitioner's Guide for Themed Follow-up Visits for Their Patients to Achieve a Healthy Weight](#), which helped practitioners deliver more sensitive obesity counseling during well visits and other visits. The guide was piloted and showed efficacy, and it is now available to providers across use through the AAP book store.

#### *Evaluation methods and metrics*

Given the size of the study, evaluation involved many metrics. System level measures were captured through structured interviews with personnel at schools, child care facilities, the YMCA, and clinics. These interviewed assessed project management, staffing, facilities, communication, and sustainability.

Surveys were also conducted with school teachers, parents, children (in 5<sup>th</sup> grade), early childhood educators, clinicians, and advisory committee members. In addition, researchers looked at community assessments, height and weight data on the children, BRFSS data, and a vending machine audit. Data were collected at baseline and 2 years. Assessments of children's and parents' physiological health, diet, fitness, and psychological health were done at 3 and 12 months, along with an assessment of parents' satisfaction with the health care system.

They saw significant changes in BMI percentile, and promising results with BMI Z-scores. There was a positive correlation between Z-scores and dose.

#### *Emerging lessons*

- A coordination group is essential.
- It may not be possible to do everything; go for the easy wins.
- Medicaid reimbursement of basic treatment of childhood obesity is needed. Medicaid did not cover obesity counseling specifically; the kids had to come back for other things.
- Constant training and reminders are vital for program implementation, particularly when payment is not an incentive.
- Need to find a balance between structure and flexibility; the classes and physical activity program need structure, but families need flexibility.
- Cultural sensitivity and relevance is key. It was important to have bilingual materials and programs and to include entire family. Not only was language, but also including relevant tips/strategies for families to try.

- Recruitment posed some challenges; it was difficult for providers to recognize kids at 85 percentile.
- Secondary prevention programs can show short-term effects that can bolster support for the effort.

### *Looking ahead*

Coming out of this study is the Choose Healthier app, which connects people with resources for healthy behavior. Content providers put their content on for free, and users do a search. It also has an Internet platform for non-mobile users.

Version 2.0 of Next Steps Themed Visits for Childhood Obesity is available through AAP and has been featured by the National Institute for Child Healthcare Quality, *Let's Go!*, and others. Fitnessgram GIS mapping has been developed to identify hotspots for interventions. It provides a good visual way to show change.

### *Sustainability*

Proposed sustainability steps include:

- Providing training and program materials in control schools and ECE centers.
- Maintenance of certification, to offer an additional carrot for providers.
- Developing a Next Steps booklet for families and a Next Steps guide and office materials for clinicians.
- Encouraging DSHS Medicaid reimbursement for obesity counseling.
- Developing an Environment, Systems, Policy training
- CORD 2.0

***Nancy Sherwood, PhD, Senior Research Investigator and Director of Scientific Development, HealthPartners Institute for Education and Research***

There are many examples of clinical-community collaboration across HealthPartners. They have developed two working groups—one to “connect the dots” or coordinate childhood obesity activities, and an evaluation workgroup to develop a framework.

### ***PowerUp***

The PowerUp logic model provides the overall community engagement framework. To impact health and BMI, we need to change policy, social norms, awareness, and systems. Ultimately, we want to move the needle on childhood BMI; we can use EMR data to see at a population level what is happening with BMI.

When working with kids, you are also working within families. One can look at health claims for families and assess cost savings related to reducing obesity.

### *Program overview*

Within these programs, there are many sub-communities, each with different flavors that need different interventions. The PowerUp community initiative in St. Croix valley is called BearPower.

### *Partnerships and collaborations*

Bear Power involved the following partners:

- School districts
- Afterschool programs
- Parent organizations
- Athletics and youth sports
- Nonprofits
- Business
- Cooking schools
- Faith community
- Public health
- Local government

Activities included “PowerUp food coaches” for child care sites, healthy school events and concessions, open gym and pool, school policy change, nutrition guidance for athletes and coaches, city proclamations to support PowerUp, and PowerUp passports with the National Park Service.

The focus was on school-age children, but they are encouraging a broader focus to include child care and engaging other parts of the community, such as transforming food shelves.

### *Evaluation methods and metrics*

The number of PowerUp classes within communities has increased, as have open gyms.

Through BearPower, there has been a lot of work within schools to implement best practices for nutrition and physical activity. Over time, using food as reward has decreased and physical activity and healthy food and beverages options (e.g., healthier foods at school carnivals) have increased.

Surveys of families with young children have shown an increase in recognition of the program when listed as a choice. Most families heard about PowerUp through school and their children.

Through the BearPower Fruit and Veggie Rx, a partnership with a large grocery store, kids received a “prescription” (coupon) for fruits and vegetables at that store. Only 29% redeemed the coupon. However, providers thought it was a great tool for engaging patients; for grocers, it provided a strong partnership opportunity. The program also used a coupon for 3 months’

reduced membership at the YMCA, with a frequent-attendance benefit that provides reduced membership rates. Data about Y use is provided to health care providers to help them tailor their message around the Y and physical activity.

### ***NET-Works***

NET-Works is part of the Childhood Obesity Prevention and Treatment Research (COPTR) Consortium.

#### *Overview*

This 3-year obesity-prevention intervention for low-income, ethnically diverse preschool children is parent-targeted and involves multiple components/settings:

- Pediatric primary care (start conversation, raise awareness)
- Home visiting (not intended for obesity prevention, but can be used to help families make changes that reduce obesity)
- Community-based parenting classes
- Community resource links

Family connectors integrate activities across the components; these individuals do the home visits.

#### *Evaluation*

In-depth process evaluation is ongoing. Participation in home visiting has been high, as has parent engagement and relationship with the family connector. Parenting classes have seen a lower rate of participation, at only 38%. Challenges posed in this program include communication issues, work schedules, life circumstances, high mobility, and family structure.

#### *Lessons learned*

Strategies that helped in overcoming the intervention challenges include establishing relationships, emphasizing whole child development, being flexible and offering a tailored approach, building self-efficacy, connecting families to community resources, and understanding and responding to parent self-interest.

#### *Next steps for NET-Works*

- Figure out most effective and cost-effective dose.
- Find ways to build obesity prevention messages into existing support systems for families so we are not creating new things for them to do.
- Foster partnerships between clinics, home visiting programs, and early child family education.

**William Stratbucker, MD, MS, FAAP**, Medical Director, Healthy Weight Center and Associate Professor of Pediatrics, Michigan State University College of Medicine, Helen DeVos Children's Hospital

#### *Program overview*

FitKids360 is a healthy lifestyle program that helps children and their families in group setting practice healthier behaviors. Desired outcomes are improved BMI percentile (this is a short time frame, but hoping for evidence that informs longer-term outcomes); changes in the obesogenic environment of the family; and psychosocial outcomes.

Health care providers refer children based on BMI and readiness-to-change assessment completed by someone in the health care practice, to determine if it is a good time for the family to start and likely to stay with the program.

The family attends an orientation and six weekly sessions with a focus on behavior, nutrition, and exercise. Extended family can participate, as these are people who are supporting change. Children are ages 5-16, with separate classes for teens. Participation data are shared with the pediatrician/clinician.

The program is free, and transportation and child care are provided free of charge; the program tries to tap into benefits the family already has. The program is funded by local grants and foundation support, and classes are sponsored by physician practices, hospitals, payers, and community groups. Staff are primarily volunteers. There are multiple locations to increase accessibility, with in-kind donations of space. The program uses a standardized curriculum with facilitators receiving training. Partners include hospital systems, college groups, YMCA, boys/girls clubs, and many more.

#### *Evaluation measures and metrics*

At the first and last class, the following measurements are taken:

- Height, weight, BMI
- Psychosocial functioning—using Peds QL inventory.
- Lifestyle behaviors, such as assess diet, sleep, screen time, and physical activity—using a “home-grown” questionnaire and the Family Nutrition and Physical Activity Assessment (FNPA).

The key domains measured were based on HealthyCounts, a tool created at Children’s Hospital (based on 5-2-1-0) to guide health routines, with some minor changes.

Retention rates reached about 79%. Getting families back for follow-up proved challenging; reunion events helped. Data seemed to indicate positive changes, even in the short time frame, with modest improvements in BMI and higher FNPA scores at 7 weeks.

To assess long-term outcomes, they are trying to get access to primary care provider records. FitKids360 reunions and FitKids360 On the Move, a fitness training for past participants, will also provide opportunities to collect measurements and other data.

Additional evaluation efforts include incorporating FNPA into primary care practice offices and evaluation in tertiary weight management.

#### *Lessons learned and next steps*

- Network of community partners is essential.
- Large payer involvement is challenging but important.
- Prospects for payment and sustainability—communities can purchase a package of materials to implement the classes.
- A structured curriculum and guide for evaluation with training was important for fidelity.

Future efforts include determining a process for replicating the program in other communities, developing/implementing FitTeens, and creating a Spanish version.

#### **Model 1 Discussion**

Dr. Robinson – *What audiences are interested in outcomes and metrics? For example, farmers were interested in Dr. Freedman’s project metrics.*

Dr. Freedman – It is important to define what the community wants to achieve at the beginning. For this community, economic opportunity for farmers was important, so they needed metrics to support that goal. Evaluation methods should capture the complexity of what the community wants to know. Farmer economic development data helped pass legislation.

Dr. Pont – Schools get paid based on attendance. Healthier kids are absent less and do better on tests. So that helps schools come along with these initiatives.

*Did anyone do cost-effectiveness analysis?*

Dr. Pont – CORD has a grant to do cost-analysis. They are looking at total cost per participant with BMI. With children and obesity, you do not really have metrics like emergency department visits. It is hard to look at longer-term health outcomes.

Dr. Robinson – Collecting cost data is a lot of work and is complicated.

*Can you do cost analysis to bring along third-party payers?*

Dr. Robinson – They often ask for cost data, but sometimes it seems like just an excuse that is being used to avoid having to further entertain the idea of providing reimbursement.

Dr. Stratbucker – Payers wanted to be able to support FitKids 360, and they tried to make the case for broadening beyond BMI as improvement in families.

Dr. Pont – Obesity is the #1 epidemic, but we cannot bill for obesity counseling, like you can for curing a rash.

*Stephen Cook – Where are integrators in these programs from?*

Dr. Stratbucker – The integrator is a passionate PCP who also has a role in a community organization that is an umbrella for many community-based programs. The chief integrator is paid by the community organization. A coordinator is paid through grant money. Champions are in lots of different areas—e.g., a payer, Salvation Army Kroc Center.

Dr. Sherwood – In HealthPartners, the funding from an integrator comes from multiple sources, sometimes a grant. Short-term outcomes can provide evidence for a more permanent role.

*How do you get buy in?*

Health care providers often feel that nothing works; there is a lot of skepticism. Data are essential. We need to show people that we can get kids/families to do the behaviors we are working on. Trying to make connections between healthier behaviors and the outcomes that people care about more immediately—school performance, etc.—is key.

Dr. Dietz – Cost-effectiveness is an area where we are not going to win. Parent engagement, where we see change in parental BMI, can be somewhere to find cost-benefit. It also shows adherence. We need to make the argument on equity, the right thing to do. These models do not really have a sustainable funding mechanism. The ultimate payer will need to be government—either directly (Medicare/Medicaid, health insurance) or an extension of government—community benefit, ACA. We need to discuss how we do that.

Dr. Belay – *The fruit/veggie prescription program had positive feedback from providers and grocers, but a low redemption rate. Why the low rate? What did families have to say about program?*



Dr. Sherwood – Thirty percent is not necessarily a bad rate, though would like to see higher. The rate might be due in part to the ability to effectively track redemption. Families had positive feedback.

Dr. Robinson – We generally expect very large effects and are disappointed in a 30% rate. But if a consumer products company got that kind of rate of coupon redemption they'd be ecstatic. Our expectations might need to be adjusted.

*Emblem Health, NYC – Live Healthy program – The company gave money each month to five organizations to run three free exercise programs in low-income neighborhoods. It was a marketing opportunity to get more members. This provided a competitive advantage—shifting them from health care company to health and wellness company. It was a way to differentiate health care plans while achieving health care goals. Have the panelists thought of leveraging health plans as partners?*

Dr. Freedman – The goal of the farmers market program was always to get people to the market. Advisory Council members asked why not recruit market shoppers to be health center members. There are opportunities to go both ways in health promotion and marketing.

Dr. Robinson – In that case, you can attract potentially healthier patients that are less costly to insure.

Dr. Pont – Attract payers to support these initiatives. They can brag about it when comparing themselves with peers.

Dr. Yanovski – *Regarding uptake, such as the 30% redemption of fruit and veggie coupon, when talking about evaluation, should we state up front what we expect as a good outcome, so you can determine better whether you met the mark for effectiveness?*

Dr. Sherwood – We need to figure out how to be more sophisticated about evaluation, such as by using SMART methodology (specific, measurable, achievable, realistic, time-bound). How would we know if we are successful? Proximal markers of success are important to establish go and no-go points.

Dr. Sherwood – How can we get what we want to do into what is already being paid for? Many health plans are doing things to change parents' health behavior, so how do we get those things to be more child focused? That might be more motivating for parents/employees.

## **Model 2: Community Engagement at the Hospital- and Health Care System Levels**

Description: This panel explored hospital programs and/or health care system-led programs with community engagement components.

**Moderator: Jerold Mande, MPH, Senior Advisor, Office of the Secretary, Food, Nutrition and Consumer Services, U.S. Department of Agriculture (USDA)**

One in four people participates in feeding programs. Each program has rules and regulations to ensure healthy food. States can spend up to 10% of this funding on interventions. Evaluation is required for programs. Working with hospitals and health systems has been an important part of their work, and they have a long history of collaboration with communities. As part of SNAP-Ed, USDA puts out a toolkit on obesity prevention interventions and strategies. Anyone with an intervention they want included can submit that through NCCOR. Any state can pick up these interventions, implement them, pay for them through SNAP-Ed, and evaluate them. The evaluation framework has 50 measure—from behavior change to outcome change. There is an upcoming meeting to evaluate that framework and develop more of a best practices document.

**Sarah C. Armstrong, MD, Associate Professor of Pediatrics and Associate Professor, Department of Community and Family Medicine and Director, Duke University Healthy Lifestyles Program**

Bull City Fit is a collaboration between Duke University and Durham, NC, Parks and Recreation, jointly with the children's obesity clinic. When the clinical program was not as successful as planned, a behavior-based intervention was introduced on campus. Children liked the program because the participants looked like them. It was a two-year process involving shared use agreement between city government and the hospital system to form this alliance. They are currently doing a retrospective study of participants, with a prospective study also beginning.

#### *Intervention approach*

The intervention was designed in collaboration with participants and families, and the name was picked by participants. The intervention included semi-structured activities six days a week, using parks and rec facilities for two hours each day—e.g., pool, gym, community garden space, small kitchen space.

The conceptual framework for the intervention looks at bit like chronic care model 2.0 with clinical obesity treatment and community-based programming, and parent and child motivation to participate in treatment.

#### *Successful strategies*

Among the strategies that led to program success:

- Shared use agreement
- Steering committee with stakeholders

- Partnership (not just a referral system)—at Bull City Fit, paid staff led programs and Duke students volunteered; at the clinic, staff inquired about and tracked participation
- Bull City “bucks”—participants get bucks for bringing in tracking form

Advocacy led to policy changes that made it easier/more likely for children to participate—like changing a rule about only wearing bathing suits in pool, to allow t-shirts and shorts, which made the children more comfortable swimming.

#### *Less successful strategies*

- Using a top-down approach where the funding institution brings the community along; this does not always foster trust.
- Failing to involve leadership in parks and recreation; once they did that, they better understood needs and the context for the program.

It is important to understand mutual benefits. For example, parks and recreation’s budget operates off the numbers served. Bull City Fit brings more participants through parks and recreation, so it is value added for them. Duke students have a requirement for community service requirement, so this program helps them out.

#### *Reach, implementation fidelity, and dose*

The program served a self-selected group of participants, mostly in the lower end of the low-income population. Most were Spanish speaking. Each of the six nights, 30-50 families participated. The activities took place in the largest community center, but in a single site. The major cost of program was for the program coordinator; there were many volunteers.

A retrospective review is under way to determine the effective dose. Clinical partnership will allow capacity to measure clinical outcomes.

#### *Evaluation methods and metrics*

They are recruiting children with obesity that present at clinic. Patients are randomized to Bull City Fit or to a clinical intervention. Those in clinical only will get Bull City Fit at end of the intervention study.

The intervention study will look at the following metrics, which were identified with input from parents, providers, and others:

- Psychosocial outcomes (parent motivation and social support, child social support, child quality of life)
- Diet and physical activity (Food Frequency and Physical Activity Questionnaires)

- Weight, physiological, behavioral outcomes (BMI, waist circumference, body fat percentage, blood pressure, lipids and glucose/insulin, 3-minute step test)

They will also look at secondary data, including socio-demographics, distance from facility, child temperament, and daily hassles.

*Replicability and sustainability*

Parks and recreation is a high-potential partner. They have >5,000 sites nationwide. Lots of value we can add back to them, and lots of value they add for children and families.

The major cost is staffing. Their intervention is sustained through funding from a foundation, but they are starting to have conversations with hospitals, raising awareness that this is a community benefit. The university setting provided rich volunteer resources; such a volunteer base may not be available in a rural setting.

We need to pull the best from many methods—what is working, what parts exactly are working, how can we replicate those in other settings?

***Ihuoma U. Eneli, MD, MS, FAAP, Director, Center for Healthy Weight and Nutrition, Nationwide Children's Hospital and Professor of Clinical Pediatrics, The Ohio State University College of Medicine***

Health systems do an incredible job in engaging the community at different levels. Then we have programs in small nonprofits that work to engage communities. There is a gap in the middle.

Healthy Choices for Healthy Children legislation is resulting in measures to reduce childhood obesity and galvanizing communities. Children's hospitals have begun driving policy change. For instance, hospitals eliminated sugar-sweetened beverages; they did not lose money by doing this. Many workplaces have done the same.

A community health needs assessment by the Nationwide Children's Hospital in the Healthy Neighborhoods, Healthy Families zone (representing three zip codes) found that health was one of the last areas that communities wanted to address. There was higher interest in safety, education, jobs, and economic development.

### *Intervention overview*

Primary Care Obesity Network (PCON) is a partnership between primary care pediatric offices and the Center for Healthy Weight and Nutrition, a tertiary care clinic, to address obesity in Central Ohio. Rationale for developing the program was in response to legislative bill on BMI screening, to improve access to care, to address deficiencies in provider training, and to increase availability of resources. The objectives were to implement evidence-based obesity prevention care in primary care clinics and create a patient-centered medical neighborhood.

Comprehensive approach to childhood obesity at Nationwide Children's Hospital:

- Stage 1 – train primary care provider
- Stage 2 – train provider and dietitian
- Stage 3 – intensive care with multidisciplinary team
- Stage 4 – bariatric surgery, very-low-calorie diet, medications

The patient-centered medical neighborhood (PCMN) is a system of relationships around the medical home, linking patients with services around the community. It is personalized, redundant, and uses consistent messaging in various settings. Care is coordinated with the medical home. It uses the AHRQ evaluation roadmap, which recognizes each of the key areas in which they can work.

This project implemented the following strategies:

- Create a roadmap.
- Align with institutional strategic vision.
- Build relationships.
- Increase awareness.

The roadmap is a diagram for global aims and PCMN sub-aims along with the key drivers and interventions/activities that will achieve those aims. Some examples of interventions include the afterschool Fitness and Nutrition (FAN) Club, community gardens, grocery store tours, community events, resource database, and linking with BMI screening in schools.

### *School-based health care: PCON in the schools*

National Children's Hospital has partnered with schools to offer school-based health care and afterschool program that promote physical activity and nutrition. Trained school-based nurse practitioners will refer to the Center for Healthy Weight and Nutrition and serve as champions for PCON.

They are mapping the PCMN to see what health care systems and other resources are in a child's area of the community—outside the medical home. Each clinic will give them resources that are important in the community.

#### *Evaluation methods and metrics*

They are evaluating the number and quality of partnerships, based on networking, coordinating, cooperating, and collaborating. The program has 20 collaborating partners.

To evaluate population dose, they looked at the “My Plate” placements given to everyone. Strength was minimal, but reach was large. They also looked at the FAN Club program, implemented in three schools in the Healthy Neighborhoods, Healthy Families zone. Reach was about 11.4% and strength, 62.6%.

They are also evaluating the overall health of the clinic population; the goal is to shift BMI Z-scores.

#### *Lessons learned*

- Know yourself vs. being opportunistic—stay true to your goals/mission.
- Evaluate and appreciate capacity.
- Remain relevant to the community and health care system—advisory groups help with this.
- Strengthen quality improvement and standardize practices.
- Keep all parties engaged.

#### *Replicability and sustainability*

They are in initial discussions about replicating the program in Chicago and Memphis.

Key factors needed for sustainability are interest among community and health system in creating a culture of health, buy-in from community and clinic leaders, funding to cover costs (administrative staff, printing, materials), and insurance reimbursement.

#### ***Pamela Schwartz, MPH, Director, Program Evaluation, Kaiser Permanente***

The mission of Kaiser Permanente—the oldest and largest private, nonprofit health care organization—is to provide high-quality affordable health services and to improve the health of its members and the communities they serve.

Their strategy is total health impact, deploying all of their assets for total health. Part of this role is improving population health. In this model, the lines between health care and community are beginning to blur.

KP's Community Health Initiative (CHI) is looking at systems, policies, and environments. What programs and activities work? What are the right metrics? How do we bring this to scale across the nation? What dose works?

The CHI logic model provides a roadmap for evaluation, with the ultimate aim being population health improvement. They are starting to see some great results. Most evaluation efforts are centered on environmental and systems changes, increases in activity, decreases in obesity.

They are starting to see transformations in communities. The question is, are changes strong enough to affect population health? For instance, a one-day walk-to-school program is unlikely to have a meaningful effect, unlike a larger intervention with multiple walk-to-school days, safety issues addressed, promotion, and improved streetscape. In Colorado, walking to school increased from 24% to 36% two years after the intervention began; 8 out of 11 communities show signs that this program will stick even after funding is gone. In another example, installing a salad bar at school increased fruit and vegetable consumption by 13%.

Seeing the greatest improvements at population level requires a combination of activities and strategies in multiple sectors. For example, physical activity increased when multiple interventions were combined—school policies, redesigned active play areas, changes in PE curriculum, open gym, and promotion of Healthy Eating Active Living (HEAL) messages.

KP convened a group of funders that have been doing obesity prevention. There was strong agreement about the factors in schools, child care, land use, and parks and recreation that have evidence of effectiveness in preventing obesity.

KP's approach to childhood obesity in CO involves a breadth of policies and programs, based on a Community Health Needs Assessment (CHNA) approach. They used a common set of indicators that had a lot of social, non-medical needs related to healthy people, healthy families, and healthy environments. Obesity was identified as one of the greatest needs in many communities. The hungry kids/families piece assessed hunger needs to address food security.

Partnering with others is essential for achieving greater impact. Consider who needs to come to the table to improve food systems, safe transport and public spaces, access/linkages to care

systems. It is also important to leverage internal resources—in Kaiser Permanente’s case, this included cultivating physician champions, supporting community access to care, and improving physician capacity to provide safety net care.

Partnerships are needed to support communities through policy, and multiple funder partnerships are key.

Looking ahead and achieving the idea of total health, how do we take our assets and deploy them toward community/population health?

Achieving greater health will require the intersection of community assets, community partners, and hospital systems. Work needs to be done in partnerships, and we need common metrics to assess these efforts.

***Bronwyn Starr, MPH, Program Officer, New York State Health Foundation***

The Prevention Agenda is one of the New York State Population Health activities resulting from an influx of money to improve care, reduce cost, increase value-based care, and address health inequities.

Efforts have focused on:

- Preventing chronic disease
- Promoting the built environment
- Promoting mental health/preventing substance abuse
- Promoting women’s health

They have funded 17 organizations to implement community health improvement projects (CHIP).

*Successful strategies* have focused on long-lasting protective interventions and changing the context to make individual default decisions healthy. For example, one community is working to eliminate soda vending machines in school, improving care for asthma, and working with businesses to improve breastfeeding-friendly workplaces.

*Less successful strategies*

- In-person meeting groups—these were less effective than online groups.
- Reliance on old data—more data collection is needed at the local level.



- Too many evidence-based interventions—we need to focus more on a smaller number of programs.
- Engaging physicians—it is important to engage the whole care team.
- Getting state and payer buy-in—this has been challenging.

#### *Reach and implementation fidelity*

The Advancing Prevention Project provides one-on-one technical assistance and learning collaboratives, offering an opportunity to share successes and lessons learned.

#### *Evaluation methods and metrics*

The grant program is funding organizations for one year to 18 months. All projects have an evaluation component as part of CHIP. They have seen some changes in breastfeeding, certification, reduction in falls, and reduction in asthma ED visits. The New York State Prevention Agenda Dashboard provides a list of all indicators they are collecting for prevention programs.

#### *Replicability and sustainability*

All projects are evidence-based, so theoretically they are all replicable and sustainable. But long-term funding is a problem. We need support from the state and payers after the grant funding ends; data from grantees will be used to make a case for continued funding. They will continue to support learning collaboratives and are funding an assessment of programs in the state to find where gaps exist, to better align efforts and inform the Prevention Agenda.

With the goal of improving population health, they are also looking at investing in transportation, parks departments, and universal school lunches.

### **Model 2 Discussion**

Mr. Mande – *What kind of data have the greatest effect?*

Dr. Armstrong – The data to collect depends on the funding organization and the partners involved. For instance, parks and recreation departments have resources they need to implement these activities—how do we sustain those and show value? One way is through facility use data. Parks and rec has problems with identity and communicating with community about their programs.

Ms. Schwartz – Behavior change data, especially at population level, is essential. There is a tension because we are community driven—communities want to do what excites them, but it may not be what is most effective.

Dr. Eneli – Among health care providers, BMI is a big piece. How many are using provider resources is important. Reach numbers and how programs are integrated is important.

Ms. Starr – Determine metrics that will leverage more funding.

Rachel Ballard – *Why wouldn't multiple changes in the environment be important metrics?*

Ms. Schwartz – We are interested in environmental changes, but as they relate to behavior changes at the population level. For example, a community garden is a change in the environment, but how much impact does that have on behavior? We need to link to food and nutrition strategy.

*How do you look at two- or three-year outcomes for projects funded by grants in a way that satisfies expectations of funders?*

Ms. Starr – Multiyear grants are not common in their organization. They have a new priority area, building healthy communities, focused on improving food access and the built environment. There is a two-year grant with a strong evaluation component built in. They are looking not for BMI changes, but for capacity building and environmental changes.

Ms. Schwartz – It is a challenge to communicate what can be expected in the short term, while making a case for longer-term investment to see changes through. Funding must go to communities that are ready to move forward and make sustainable changes.

Dr. Cook – *When you have introduced initiatives, have you seen others in the community copy and introduce their own initiatives?*

Dr. Armstrong – Yes, this happens. We need to remember that there is plenty of the problem to go around, so we should share lessons learned, collaborate, and share best practices rather than viewing other programs as a threat or competition.

Dr. Cook – *Can you speak to the finding that online activities were more effective than in person?*

Dr. Starr – That finding pertained to interventions for anti-smoking and breastfeeding. It also applies to the learning collaboratives, as there is not enough funding to do face-to-face interactions.

Dr. Cook – *Have you seen that when one organization starts doing something, others step away and say, "You've got this"?*

Dr. Eneli – We need to try to use resources where they will likely have the biggest impact and combine resources where we can. That means build relationships with other organizations, inviting to the table other organizations you hear are doing things in the same arena.

*How do you make sure that smaller community service providers are engaged? Even when applications are being put together and money is not provided yet, how do you involve them?*

Ms. Starr – Local health departments, as part of CHIP, have to do community engagement, so that work was done ahead of their request for proposals (RFP). That was one of the measures they looked at—resident engagement, other community-based orgs being engaged. With the NY State waiver program, smaller service organizations are on the ground doing heavy lifting, but hospital systems have the money—how does that trickle down?

Dr. Armstrong – Relationships took longer to build than anticipated. A CHNA done every two years helps inform those conversations. You can look through organizations’ documents for potential partners and help understand their priorities, what they have to report on. It is good to understand that early on.

*Is there some systematic way to judge whether an alternate metric is strong enough to make you do it?*

Ms. Schwartz – Dose is one factor. Having conversations with the community about the evidence base and understanding the community context is important so that the metrics we look at are community-friendly and make sense to them. Data should be driven both by community and questions we ask about effectiveness.

*How do you make judgements when the community preference does not match evidence about dose?*

Some of those decisions are driven by the funder, the evaluator, and the reality of the community. Listening to the community is essential.

Dr. Eneli – The advisory group discusses what they want to do, what the theme is. Then they look at the value and popularity. We have to consider visibility and entry point. Dialog between groups is essential.

*Dr. Belay – Have you had discussions with people other than community partners, such as major stakeholders, funders?*

Dr. Armstrong – In their project, the shared use agreement has been very helpful to work out details; it has to be reevaluated and re-signed every three years. It requires a lot of negotiation with health system about why they should take on liability. Helpful data to inform these conversations has been how many people are participating, how many are patients, and how many are children of Duke employees. Putting the program into local media again and again is very helpful; this is great public relations for the health center.

### **Model 3: Community Engagement: New Perspectives**

Description: This panel explored lessons learned from other efforts, including Fitness in the City, family engagement, and engaging food systems as part of a defined community benefit.

**Moderator: Brook Belay, CDC**

**Shari Nethersole, MD, Executive Director for Community Health, Boston Children's Hospital and Assistant Professor of Pediatrics, Harvard Medical School**

Fitness in the City (FIC), was developed by the Office of Community Health, which is where community benefits are administered for the hospital.

FIC started 10 years ago, responding to a CHNA that showed high rates of obesity and overweight. It was difficult to engage families and get them to make behavior changes, and there were huge disparities. Many had insufficient access to physical activity. Even when there were resources, they were not being accessed.

When FIC started, there was not a lot of evidence for what works to address childhood obesity. They created a model to focus on community health centers as a partner to reduce obesity.

Community health centers (CHCs) were a natural choice (versus, say, schools or other venues) because Boston (the site of first community health center) has 23 CHCs, and the hospital already had relationships with 11 of these centers. CHCs are true medical homes; about 60% of low-income kids get care there. And the health centers were interested themselves in addressing this issue.

#### *Program approach*

FIC is not a medical model. The primary care provider visit is the identification point and that leads to referral to a case manager, family assessment, and engaging the family in specific intervention for nutrition and physical activity. The case manager coaches the family, with a touchpoint generally every other week and a check in at three and six months. The family returns to the PCP at one year, and the PCP takes measurements of height, weight, BMI as usual.

The case management approach is key—it is family- and patient-centered, identifying the interventions that work best for the family. Intervention involves physical activity and nutrition. Some sites have space for physical activity; others use community-based resources for that. Scholarships are available for the Y and a few other sites. Various nutrition interventions are

included—with individual visits in some sites and group in others. Additional activities include gardening, supermarket tours, and cooking lessons. Flexibility is built in, as each CHC has a different population with different needs, cultures, etc. About 80% of health centers have onsite nutrition, physical activity, gardening, and cooking programs.

Quarterly meetings are held among the CHCs. This is an opportunity for health centers to share lessons, challenges, etc. Each center needs a provider as a champion for the program, in addition to the case manager.

Ages of participants range 5-18 years, with a mean 11.6. About two-thirds are Hispanic, and almost one-quarter are Black/African American. 973 children were enrolled in the last year; about 40-50% of them participate in all the activities.

#### *Evaluation and metrics*

They looked at several health-related behaviors at three months: soda consumption, exercise, number of days the child eats breakfast, fruits/veggies consumed per day, hours TV watched on the weekday/weekend. They have seen significant decreases in some of these measures, along with a drop in mean BMI from 96.2% to 95.2%.

To gauge effectiveness, they compared children in the study with controls a comparison group that did not receive the intervention. They found that 60% of FIC participants overall decreased or maintained their BMI compared with 52% in the comparison group. However, this effect was primarily in the 85-95 percentile group (56% compared to 39%,  $p < 0.01$ ), with minimal effect seen above 95 percentile.

#### *Replicability and sustainability*

Factors that contribute to the sustainability of this program:

- Builds capacity of CHCs.
- Community-based models.
- Helps engage families in their own community.
- Serves more children at lower cost.
- Could be sustainable, cost-effective model if payment reform occurs.

#### *Looking ahead*

Future efforts include:

- A trajectory analysis to look at kids in the program early on and see if any long-term impact is evident, and gathering qualitative data from past participants through focus groups.

- Improving referrals—activation, data reporting, tracking.
- CHC capacity building, including developing holistic wellness programming.

**Victoria W. Rogers, MD**, Program Director, *Let's Go!*, The Barbara Bush Children's Hospital at Maine Medical Center

*Let's Go!* Maine started in 2004 with 10 primary practices. It began with the 5-2-1 message and added 0. At the same time, business leaders in Portland got together to do something about obesity. There was no RFP, no designated metrics. The partnership included United Way Greater Portland and seven businesses, from insurers to health systems to grocery stores. These founding partners put money in; now there are many more foundations and businesses, such as managed care and Head Start.

#### *Program approach*

*Let's Go!* serves children birth to adulthood, and they are adding prenatal. It is about changing environments and policies in each of six arenas where children and families live, learn, work, and play. Sites are asked to do specific things in these arenas.

#### *Successful strategies*

- Implementation of a clear, easy-to-remember message: 5-2-1-0 is a simple, effective message that connects all settings.
- Developing actionable steps for individuals around each of those messages.
- Measure what they ask people to do. For example, if you ask teachers not to use food as a reward, collect data on that and provide the data back at local and regional level.
- Use quality improvement methodology.

#### *Less successful strategies*

- Trying to fit their program into others.
- Collaboration with grants that have strict deliverables and tight time tables—Their activities are based on evidence, but there is room for innovation/emerging evidence.
- Not managing expectations of funders and sites—Funders put money on the table, with the expectation that there would be a decrease in obesity, but that was not realistic. They worked hard to manage relationships and expectations.

#### *Reach and implementation fidelity*

The program began in the greater Portland area and has expanded across Maine and into neighboring communities. There are nearly 1,000 sites. Each *Let's Go!* Site has a coordinator, team, and entity (hospital in most cases). Dissemination partners started with United Way of

Portland, but that did not have statewide reach, so they moved to Children's Hospital at Maine Medical Center. MaineHealth helped fund for five years, and then the hospital had to pick up cost. There are currently 14 dissemination partners.

Ten strategies for success have been identified, which sites can choose to implement. The first five have more evidence, so sites are encouraged to do those, but they are not required to. Health care providers are asked to hang the 5-2-1-0 message poster in their offices, do BMI after age 2 (accurately weigh, measure), and ask respectful questions about obesity-related issues.

#### *Evaluation methods and metrics*

The program assesses:

- Awareness of message and program (through phone survey)
- Environmental changes (measured by the 10 strategies)
- Behavioral changes (school-based data)
- Obesity prevalence

There are signs of effectiveness. They have seen high receptivity among sites and stakeholders. Environmental changes are occurring, and policies are being developed and implemented. *Let's Go!* is seen as one of the go-to organizations in Maine and nationally.

#### *Replicability and sustainability*

Looking toward sustainability, Dr. Rogers noted:

- Coordination with hospitals and health systems
- Connections to the ACA and community benefits
- Collective Impact Framework
- Mentoring program

Innovation is key. People and government like to listen to doctors, and stories move people and government, but data must support the stories. Building relationships and trust is essential. Sites trust that they'll get high-quality TA and that their success will be celebrated, and we trust them to do what is asked and to innovate.

**Emma Sirois, MA**, National Program Coordinator, *Healthy Food in Health Care, Health Care Without Harm*

Health Care Without Harm's (HCWH) mission is to transform the health sector worldwide, without compromising patient safety or care, so that it becomes ecologically sustainable and a leading advocate for environmental health and justice.

Ten years ago, they founded Healthy Food in Health Care to look at how hospitals can model healthy eating; how they can use their food purchasing dollars to support the development of a more sustainable food system; and how they can align their work in their kitchens, with their clinical programs, and further their community programs.

HCWH uses an environmental nutrition framework, which holds that healthy food must be defined not only by nutritional quality, but equally by a food system that is economically viable, environmentally sustainable, and supportive of human dignity and justice.

The evolution of healthy food programming they have seen and supported in the health sector has involved:

- Shifting food purchasing for their patient and cafeteria service to healthier and regionally and sustainably grown and produced foods.
- Extending beyond the kitchen to provide healthy food access through on-site farmers markets, employee CSA, and on-site food gardens.
- Alignment and incorporation with clinical programs and community programs to more explicitly link their clinical programs to these efforts in progressive and exciting ways.

In seeking opportunities for community interventions, it is important not just to be looking at the community benefit programs of nonprofit hospitals, but also to look at for-profit hospitals where similar community health programs exist. Private insurers also have skin in the game and need to understand population health and participate alongside their nonprofit colleagues.

#### *Intervention approach*

Intervention points in the food system are at the individual, community, and system level. Community interventions are gaining an evidence base. In 2014, HCWH conducted a survey of nonprofit hospitals in Massachusetts looking specifically at whether hospitals were incorporating a review of diet and food access into their CHNAs; what types of food access and nutrition activities hospitals are currently engaged in; how those programs operate; and how they were evaluating the impact of healthy food access programs on health outcomes (that study was provided in the e-portfolio). Several prevalent models emerged including:

- Food insecurity screening: Obesity is closely related to food insecurity. Many hospitals now incorporate food security screening tools into emergency room and other clinical interactions and have resources to address the issue, such as on-site food pantries and resources to connect patients with community services.



- Fruit and veggie prescription programs: These are very prevalent, but their structure and success vary widely. One successful program provides the fruit and veggie coupon on the same day that a mobile market is outside the clinic, and gets a higher participation/redemption rate.
- Community-based food production (e.g., community gardens): These efforts are also supported by many community benefit programs.

Further upstream, some creative projects are underway. In the Bay Area, HCWH is currently working with Emerald Cities Collaborative and the Democracy Collaborative, along with a number of Bay Area community partners including Kaiser Permanente, Dignity Health, and the University of California, on the Anchors for Resilient Communities (ARC) project. ARC aims to leverage the assets and capacities of East Bay anchor institutions, including hospitals and health systems, to address social (both economic and environmental) determinants of health, with a focus on meeting the needs of underserved neighborhoods in Richmond and Oakland. One of the ARC's priority issue areas is the development of a healthy, regional food system that impacts community health outcomes and localizes the food economy to generate community wealth. Some of the strategies currently being evaluated include a wholesale distribution center with processing kitchen for locally/regionally grown produce that would serve schools, hospitals, and other institutional buyers while providing culinary training and jobs in the community.

For this model to be successful, partnerships are imperative. A community of anchor institutions—those that have long-term investment, big employers, a large footprint from an environmental standpoint—can bring about significant systems change in a community.

### *Evaluation*

The Massachusetts study found that the hospital used the following metrics—most of them process-related vs. outcome-related—to evaluate program impact:

- BMI
- Pounds of food
- Readmission rates
- Number of people served

Program evaluation is critical to a hospital's ability to invest in these interventions. A common evaluation framework and common indicators increase sample size and findings—especially important with correlations. Collaborative baselining before implementing food environment changes is also important.

### *Next steps*

Health Care Without Harm is replicating this study nationally through funding from the Robert Wood Johnson Foundation. They are also developing a resource toolkit for facilities (hospitals, etc.) and community organization and developing regional learning networks.

### **Model 3 Discussion**

Dr. Belay – *Have you had evaluation data that really pointed to success that helped to galvanize stakeholders? Has there been one piece of evaluation data that pointed to a challenge that you were able to leverage with stakeholders?*

Dr. Nethersole – There was a lot of skepticism in the beginning. BMI data were critically important to show to the hospital's subcommittee. These data were also important for the community health centers in building their capacity. It was galvanizing for providers because they were seeing the same problem over and over again, so it was helpful to see some impact over time.

Ms. Sirois – In their work discussing purchasing with health care, they have been able to see what impact a change could have, to see the multiplier effect. We need to strengthen the effect of hospitals/health systems on a community. When building a program it is helpful to take into account the needs of other programs and systems.

Dr. Rogers – Set SMART goals around awareness, obesity, and environmental changes. Then tell people what they were going to measure, provide technical assistance, measure it, and give data back to the sites. When someone like the CEO of a hospital sees his kids' school change, it has impact. When data support the story and people can see a change, they are more likely to get on board. Get data as local as possible, and be realistic. What backfires is when you say you can reduce obesity by 10% and then you cannot, it hurts credibility.

Dr. Cook – *Who does the measuring and what exactly are they collecting?*

Dr. Rogers – In a school, a coordinator and champion meet with the school's contact to go over an "action packet." The school decides what they want to do and sets out measures for those activities, then the school fills out online assessment at end of year and they celebrate and recognize them as being *Let's Go!* site.

Dr. Dietz – One lesson is to stratify the programs and findings so that kids in the 95th percentile get benefit vs. one-size-fits programs.

As much as we have to work toward payment for providers, we may not get that. Providers want to do these things because it is the right thing to do, but they want systematic feedback to know what they are doing is worthwhile.

Dr. Nethersole – Health centers receive \$40,000 a year in a grant. The expectation is that each center will see 100 kids a year. They collected data because we required it and the health centers and hospital wanted it to assess impact. The requirement for the pediatric champion was important because that is a point person to drive implementation and share data. We need to more regularly engage providers in data feedback.

Dr. Rogers – *Let's Go!* coordinators are now well-versed in data and limitations. Some people do not like the data when they get them back. In those instances, it is a chance to improve and move forward.

*At each school, there is a person who reports what they are doing—Is it an impression or based on info collected?*

Dr. Rogers – It is an impression, but hopefully one informed by discussion with the team.

Dr. Freedman – *What are some levers that can have a significant impact? Or some factors that have a critical impact, without which changes cannot occur?*

Dr. Rogers – One thing that was important was to not focus on obesity, but on healthy eating and physical activity. Having a local person is essential. Having 10 things that everyone works on can result in collective impact.

Dr. Nethersole – Development of a model that everyone follows was important for engaging health centers in trying different approaches and in pulling everyone together.

### **Influences on Decision Making within Clinical-Community Systems**

Description: This panel explored the views of funders when it comes to value propositions for both obesity-related and other community engagement and benefit funding.

**Moderator: Rachel Ballard, MD, MPH, Director of Research Coordination, Office of Disease Prevention, Office of the Director, NIH**

About a year ago, NCCOR decided to move into this area and explore what ACA meant in terms of community benefit. This effort has given us a better sense of where the field is and what the need might be.

**Heidi F. Burke, MPH, Senior Program Officer, Greater Rochester Health Foundation**

In the early years, Greater Rochester Health Foundation funded programs in suburban areas, but they are now working in the city to increase the percentage of children at a healthy weight. Programs involve advocacy, communication, and work with the community.

**Valerie A. Lawson MS, RD, LDN**, Senior Program Development Manager,  
Healthy Living, YMCA of the USA

YMCA has been working in different scenarios to reduce childhood obesity. In 2010, they convened an expert panel. More recently, they have implemented an intervention for kids in the 95th percentile and their families.

**Deborah A. Deatrck, MPH**, Senior Vice President for Community Health, MaineHealth

Investment in *Let's Go!* is one of seven population health priorities for MaineHealth. They have been working on this since 2006.

**Joey Vaughan**, Manager of Community Benefits, Stanford Children's Health, Lucile Packard Children's Hospital Stanford

He directs community health benefits. They have three varying interventions.

Dr. Ballard – *What are the key factors your organization considers when making decisions to invest resources in clinical-community engagement initiatives?*

Ms. Lawson – Each YMCA is its own 501(c)3. Questions they consider: Does a Y have the capacity? Is there interest from the local medical community—are there HCPs who want to work with Y? Is there support from senior leadership in the Y? Does the Y have the programs and practices the health care community is looking for?

Ms. Deatrck – The investment needs to be consistent with the vision and mission; most hospitals are small, community-access hospitals. It also needs to be consistent with the strategic plan at the system level, and with implementation plans—because that is what gets resources. An implementation plan that goes along with CHNA is important. Third, it has to be consistent with seven large, population health priorities. Also, alignment with ACO quality measures; there are not a lot of pediatric quality measures. Finally, resources must be available.

Mr. Vaughan – The CHNA is their roadmap. They do theirs in conjunction with other hospitals. They hone in on the implementation strategy and internal and external grants (to CBOs) available. They also evaluate cost and impact when making funding decisions. Health initiatives are connected to CHNAs done every three years.

Ms. Burke – They are a private, local foundation. These efforts must fit with the strategy the board has put forth. If it fits, it is typically funded.

Dr. Ballard – *What processes do each of you follow for decision making within your respective clinical-community engagement experiences?*

Mr. Vaughan – Their organization is moving toward making funding decisions on objective data. This is new to community benefit in some places; it is not for people's pet projects.

Ms. Lawson – Her health system has redefined the notion of community benefit. Many people think of community benefit as charity care. A new strategy for sustainable resources used for community benefit is Fund Balance Transfer. Each year, hospitals and health systems must allocate less than 1% of unallocated investments (0.07%, \$9 mil) to support community health programs, such as obesity prevention and many others. They go through a series of steps to propose what outcomes and metrics will be. This has been a source of support for *Let's Go!* for several years. It takes resources generated by hospitals and reinvests in community. As the system grows, funds available for initiatives also grow.

Ms. Deatrick – They help Ys go through needs assessments and determine the demand for services, to identify if they are in a place to move forward.

Ms. Burke – In a revised strategy, they are looking to partner with clinicians who can work with families in city of Rochester. They need to break down barriers that families have identified. Champions have been essential.

Dr. Ballard – *Given the changing health care landscape (e.g., ACA implementation, increasing use of EMRs, changing reimbursement models), how do you see this impacting needed evaluation metrics over the next few years?*

Mr. Vaughan – The IRS now requires evaluation of community benefits. There is a big gap for some organizations that do not have that capacity. There is room for a framework that people can use for evaluation across organizations.

Ms. Lawson – The Health Index Report has seven priorities the system has been tracking for years. They need to look at policy outcomes that can support the work they are doing— regarding reimbursement, taxation, care coordination, etc. These factors are not so well understood in the health care field. Doctors are comfortable working in the health care setting, and expanding into schools, but getting into the policy arena is not comfortable.

Ms. Burke –EMRs made the job a little easier. A prevalence study to assess healthy weight, overweight, obesity was much easier with EMRs. They gained thousands more records that way, but it was also trickier because some EMRs prepopulate/default. Need to be careful with what they learn and how interpret it.

Ms. Deatrick – Regarding EMRs, there needs to be a feedback loop to the patient/participant to help them know and understand their data, but the provider needs to understand the metrics the Y is using and how the people referred did in the program.

Dr. Ballard – *What have you learned from the outcomes of your clinical-community engagement experiences that has changed the way you make decisions about investing resources, or will do so in the future?*

Ms. Deatrick – Relationships require constant follow-up and communication. There are multiple avenues for people to receive resources in the community. It is important to understand what else is available in the community, that there are several pathways for people to end up at the YMCA.

Ms. Burke – The prevalence study data helped them decide whether to go wide and thin or use a deep/narrower strategy. They went with nine city schools and supports around them.

Ms. Lawson – It is all about scale. They go deep and wide; they are in almost all schools and many child care centers. When you have large reach, you can evaluate effectively. Charismatic leadership—primarily physicians—is essential, along with perseverance to work through challenges. We need to nurture our leaders. She has been working with others to develop a Preventive Medicine Residency program. We need doctors who understand preventive medicine and population health.

Mr. Vaughan – They have a weight control program that goes very deep, but it is very expensive. They also have a variety of programs, including 5-2-1-0 and physical activity programs. They balance their portfolio between wide and deep.

Dr. Ballard – *For Ms. Lawson – Can you say a bit more about physicians being uncomfortable with policy?*

Ms. Lawson – Pediatricians do know how to advocate. But it is difficult for doctors to be in front of community groups, and policy makers who do not always understand science and the rationale behind issues, like immunization. They also need to better understand the legislative process.

Dr. Ballard – *Is there anything unique in healthy eating and active living, compared with other areas, like smoking cessation?*

Ms. Lawson – Some challenges in this field are linking outcome measures with process. We are creating the evidence base. It is important to gather in settings like this meeting to identify what we need to measure. For instance, we can track immunization by provider, region, etc. We can follow up with people who call quit line to see who is still quit. It is harder to do some of that with obesity in children.

Ms. Deatrick – This is a complex issue because you are dealing with culture, parenting practices, sensitivities. It is not just tracking numbers like high blood pressure.

## Discussion

Dr. Cook – *Can you clarify the requirements for how community benefit money spent?*

Mr. Vaughan – There is a core set of things that count for community benefit, such as charity care, training the next set of doctors, and the set of activities and services mandated by the CHNA. Then there is a second layer of purposeful activities.

Ms. Lawson – What is laid out in the federal regulations is one thing, but there is room to interpret. We need to help hospitals define what these activities are. Leaders want to connect health care to the community. We need to engage them more in setting priorities and strategies.

Dr. Ballard – *Do boards look at cost effectiveness? Do they look at investing in communities? At disparities?*

Mr. Vaughan – Regulations are somewhat contradictory—to help the community at large while also helping those most at risk. Grants are targeted most at the highest risk population, but they also reach others that are not so at risk.

Ms. Lawson – They are often asked by board if they are “moving the needle” on population health. In their lingo, that means population-based prevalence rates. These reductions can take decades. Detailed logic models are important to demonstrate process outcomes.

Ms. Burke – Reminding stakeholders about short- and midterm outcomes is critical; many want to jump ahead to long-term outcomes. We need to reeducate them on what is realistic in this context.

Ms. Deatrick – Ys need the evidence for providers to get reimbursement.

Dr. Sirois – *There has been lots of discussion about the impact expansion of health care coverage will have on community benefit funds. Are you seeing a reduction in charity care and increased availability of community benefit grant funds?*

Ms. Lawson – In Maine, the governor refused to expand Medicaid, so they have seen uptick in charity care.

Shale Wong – *Can you give a breakdown of how dollars are spent?*

Mr. Vaughan – Children’s Hospital is at an academic medical center, and they also see a lot of Medicaid shortfall. This shortfall is a large part of their community benefit. Charity dental assistance and training are also part of the benefit. Much of what a hospital is naturally doing

counts. His hospital also sets aside \$2 million in grants. This is not necessary to reach what is required for community benefit, but has always done that.

For those working on a community program, there is a misperception that a much larger pot of money is available for community programs, without realizing that some goes to charity care and training and other things.

Dr. Nethersole – There is not a certain dollar amount you have to spend on community benefit. There have been suggestions, but no standard. The reality is that ACA has not necessarily increased the availability of money for community benefit programs. The smallest part of what is funded is the community interventions.

Mr. Vaughan – Although community interventions are the smallest piece of funding, they are also very visible and well publicized, contributing to the misperception.

Many people going into exchanges get high-deductible programs. They cannot meet the deductible and tap the charitable care.

One factor to consider is the extension component of the land grant university system. It is cost effective because it is a system already in place to reach out to the community. It is suggested we tap into this underused resource.

Dr. Eneli – *How can we share risk with providers? Do the savings you get through an ACO go back into the system?*

Ms. Lawson – MaineHealth has an ACO; it is mostly Medicare but is expanding to other populations. We need to look at carve-outs to support programs/interventions. But the question is who will choose which programs get the investment, what criteria are used to make those decisions? Moving beyond fee-for-service to value-based systems, we need to look at compensating providers for outcomes vs. throughput.

Dr. Nethersole – Boston Children’s Hospital is about to launch an ACO. How do you make sure resources are available for patients in the ACO? ACO is around a population of patients you are contracted to care for. This is not exactly population health; rather, often a subset of the community. With community benefit, you cannot look like you are triggering referrals to your organization—this is a challenge.

Mr. Vaughan – There are federal regulations, but 22 states have their own regulations.



Dr. Dietz – Community benefit strategies are opaque, hard to know exactly what they are doing. In DC, for instance, reporting requirements are pretty general. It is hard to hold hospitals accountable without knowing what hospitals are striving to do.

Dr. Cook – *What repercussions are there if hospitals do not meet their goals or if their implementation plans do not reflect those goals?*

Mr. Vaughan – In the initial community health needs assessment language, there was a fine for not reporting.

### **Group Discussion, Reaction, and Synthesis of Day 1**

**Brook Belay, CDC, Sue Yanovski, NIH**

Dr. Belay – Some common themes have emerged – BMI, health disparities, how to measure costs, challenges of connecting data and programs, measures of increasing access and retention, fidelity of implementation. The benefit of looking at some of these measures is they garner a lot of interest and direct how to better meet needs. Need to reframe how we look at cost and value that something brings—for health, school performance and attendance, society—vs. reducing cost. There has been some light shed on limitations of information exchange. How do we get stakeholders to all feed one another data regarding evaluation, changing social norms, developing social movement (e.g., people talking with representatives, etc.)?

Dr. Yanovski – We often cannot do a randomized controlled trials with community benefit programs. How much evidence is enough to be useful for stakeholders? Some things are easy to measure, such as how many community gardens started. We can ask people about some things—physical activity, fruit/veggie consumption—but those are usually self-reported. With BMI, we are starting to see some stabilization across the board—so how do you know that it is your intervention that is having an effect? What evidence is enough? What intervention and whom? What intensity do you need to have an impact? We need to look at subgroups and not rely on post hoc analyses at the end to tease out where benefits might be.

Dr. Armstrong – *We need to think about social determinants of health as outcome measures. Conversation focused on clinical-community partnerships in childhood obesity. Are there other diseases that we learn from—cancer screening, asthma?*

Dr. Belay – Lead screening and reduction might be a model to learn from. Thinking about social determinants of health and health equity, how do we make sure that children and families live in safe, healthy homes? As much as we can construct surveys and conduct conversations with stakeholders to determine what we want to look at, it all gets woven into these stories that we

can then include in all of our frameworks, so when it is time to talk with a decision maker, we have compelling stories and data.

Dr. Cook – If you look at one type of intervention, the metrics can vary depending on who you are working with. ACOs might care about parents, employer groups might not care about kids, just the parents/employees. How you make the request will differ by who you go to. People are putting out a metric based on weight change, but if we do not use evidence to define what that is, you might get a Medicaid director who wants to tie reimbursement to a high percentage of children going from obese to not obese. We need to tie what we can achieve to what is realistic to reimbursement.

Mr. Vaughan – The next CHNA is coming up, and social determinants of health will be included among needs. They were not last time.

Dr. Dietz – We have not talked today about community health programs. A lot of those programs are valid; NCCOR is looking intensely at four communities. Maybe we have the model wrong. Should we be talking about community-clinical partnerships? The money still comes from medical side, but investments from the community side might lead to best outcomes for the medical investments.

Dr. Belay – When we talk about ACOs and such, we talk about number of events over number of lives over a time period. We do not see that in pediatric obesity. How do we change that model? Can pediatric obesity be reframed as a social concern? Can we have support and innovation originate from mechanisms like social impact bonds?

Dr. Robinson – A lot of experience has been in community-based programs, and then under duress, including health care because the issue is a health problem. The elephant in the room is that the best solution to this problem might be outside of health care, which means resources are going to have to be moved from medicine to transportation, housing, education, etc. In planning this meeting, we discussed whether to include links from the clinical to community setting, but also including those in community setting that are working with clinical.

Dr. Freedman – Obesity is not salient in many communities. How do we frame evaluation so it is not focused exclusively on obesity, but on healthy eating? Many people who are obese do not define themselves that way, and there are some who value being big. Often people are not interested in obesity, but they are interested in healthy eating/healthy living.

*How do we integrate community data into EMRs to support clinical medicine?*

Memphis is doing this—including DOT and vital stats data, and some grant proposals are required to send those data back to the point of care.

Dr. Dietz – At Northwestern University, Bob Kushner surveyed communities their patients came from, so when a physician sees a patient he or she will know the environment the patient is in. This gets the idea of environment in the medical students' minds.

Dr. Ballard – There are examples of this happening in parts of the country; but it is not systematic. There has been work on this in asthma/air quality.

Dr. Rogers – They tried to put community resources together, but it was hard to keep up to date. One fear of having all of this information about patient's environment, is that a doctor will tell patients what to do based on where they are from and what their situation is. Do we have evidence that providing patients with resources improves outcomes?

Dr. Eneli – Community organizations value the idea that they are an access pathway to services people could not otherwise access. Before we throw out BMI when talking about community programs, consider that there are a large number of children each year that go from normal weight to overweight to obese. Maybe we stratify programs—for example, the outcome might be to help kids maintain normal BMI or not move from overweight to obese.

Dr. Armstrong – We need to consider some clinical outcomes, like fatty liver.

Dr. Pont – It is about weight and BMI ultimately; we have to see it come down, even if that is not what we focus on when talking to the patient. At the population level, that is what we have to work toward because elevated BMI still contributes to negative health outcomes. However, other labs can come down before BMI does, which can be motivating.

No one wants unhealthy children. It is important to reframe the discussion empathetically to improve overall health.

Dr. Rogers – They looked at exposure to message—where did you hear it, did you like it, did you know it—and whether parents and kids were practicing healthy behaviors? Three or more times was significant for seeing positive results.

Dr. Yanovski – *For stakeholders, communities, and clinicians, how much evidence is enough? Should it differ by type of intervention, cost, and intensity?*

Dr. Robinson – Comparing with the legal system, we can talk about evidence beyond a shadow of a doubt vs. a preponderance of evidence. If something has a high opportunity cost, we need a high level of evidence. Sometimes side benefits can occur of a program so you do not need as

much evidence. If federal agencies and large funders are going to push certain programs, we need a very high level of evidence (i.e., randomized controlled trials). For other programs, less evidence is needed. Good stories are often enough for some funders. We need to set an example so we aim for the highest quality data.

Ms. Schwartz – They are being asked by funders to build the business case, though what that means is somewhat unclear. It is difficult to provide that.

Dr. Wong – Funding goes toward data that are important to the funding source. We need to be able to demonstrate the benefit across the community, but if health care is funding, they only want to see health care data. How do we get the attention of the health care dollar that goes to the side benefit? The same goes for education dollars—how do we get that sector to see that health care benefit applies as an outcome that counts? This issue has been a challenge in working across sectors.

Dr. Rogers – Funding has to come from more than health care. We need a more diverse set of funders. With *Let's Go!*, the genesis came not from health care but from business, which has been working with her as part of the Convergence partnership for 5-6 years. The partnership has been working with foundations, economic development entities, and health systems—it is hard work to get from talking about an issue to seeing a need to opening a pocketbook.

They use a Collective Impact framework to use existing, validated tools, but then stories support those data. Funders often do not want to fund evaluation; they want to fund the programs themselves. It is possible to put the dollars within the framework so that evaluation is captured.

Dr. Robinson clarified what is meant by side benefits—those things that people view as good but that they were not going to evaluate, such as bringing police into schools through substance abuse programs. For side benefits as well as the primary metrics, we need a high level of evidence if we are saying others should do it.

Mr. Vaughan – Where you are matters when discussing community health benefit. In California, the annual report does capture some of the ancillary benefits.

Dr. Armstrong – When comparing clinical intervention alone vs. community-clinical program, it is hard to keep “clean”—even in a highly regulated environment—because it is community based. People can hear about an intervention in their community and that makes it tough for recruitment.

Dr. Belay – *How have you thought about integrating measures of social justice/equity around stigmatization and how to avoid that? Can we include that in an evaluation framework?*

Dr. Pont – This is really important. At the system level, if there is incentive to improve weight, but weight management services are not paid for, this is a disconnect. When we look at any interventions, what is it you are really doing? For instance, if a worksite wellness program results in an average 3 pound weight loss, the employer says they are doing the right thing, but the evidence is not there.

Dr. Robinson – It is a good idea to assess stigma and bias in different settings, but we do not have interventions to address it. Even with preferred language that has been published 20 years ago, we do not have evidence that it is beneficial. Some interventions are focusing on people who are suffering with obesity themselves to help them interpret the language themselves.

Dr. Pont – We have enough information to act. When he uses empathetic language, stakeholders are more receptive. It would be great to document that more formally. It is easy for some employers to jump to punitive measures, especially if they go with a smoking model. The sooner we have conversations about changes in the workplace—revamping vending machines, improving workplace wellness programs—the sooner we can start having a positive impact vs. a punitive approach.

## DAY 2

### Overview

Workshop attendees received background on developing evaluation plans and develop a draft evaluation framework for health care-community engagement programs and models. In breakout sessions, they considered potential measures and metrics to drive the evaluation of programs to determine effectiveness, replicability, and sustainability. This discussion will inform an agenda for further research in the field and delineate measures to support critical research.

### Interactive: Developing an Evaluation Framework

Description: This session provided critical background on developing evaluation plans and guided workshop participants toward developing an evaluation framework for childhood obesity health care-community engagement models, including a logic model and possible metrics.

**Daniel Kidder, PhD**, Health Scientist and Evaluation Lead, Program Performance and Evaluation Office, Office of the Director, CDC

During this session, Dr. Kidder discussed:

- Importance of showing impact
- Creating roadmap for your program
- How that roadmap helps you define impact and refine efforts to improve impact
- Indicator of success

Measuring impact allows us to prioritize what we are going to do, to sustain it if it is effective, and to improve it if it is not. How can we have the maximum health impact? (Dr. Thomas Frieden, CDC director).

#### *Challenges to showing impact*

- Public health problems are complex.
- There is no magic pill for many chronic and infectious diseases (and if there is, contextual factors play a role).
- We need to understand contextual environment (clinical, policy, etc.).

It is important to identify and measure early outcomes that may indicate success or problems.

#### *Six things programs need to know and do:*

- Identify the big “need” to which the program is contributing.
- Develop a basic roadmap that defines the problem (what), why it matters (so what?), and the need.
- Define the accountable outcome—how far down the road can you get?
- Identify short-term outcomes that leads to accountable outcome.
- Implement strong activities that lead to short-term outcomes, and define what “strong” means.
- Determine contextual factors that help or hobble (e.g., social determinants of health).

Program and evaluation must be integrated, following the continuous quality improvement cycle: planning, performance measurement, evaluation.

The CDC program evaluation framework guides evaluation at the agency. It involves engaging stakeholders, describing program, focusing on evaluation design, gathering credible evidence, justifying conclusions, ensuring use, and sharing lessons learned.

The goal for the workshop discussion is to describe the program. The rest of the steps are much easier if we do this step well first.

Describing the program using a roadmap or logic model:

- Provides a graphic depiction of the relationship between your program's activities and their intended effects or outcomes.
- Shows the if-then relationships among program elements.
- Helps ensure clarity and consensus about main strategies and activities and intended outcomes.

All CDC funding announcements have required a logic model to help grantees know what they are trying to achieve.

*Components of the logic model – the core of your program description:*

- Big need your program will address
- Target groups who need to take action and the kinds of actions they need to take
- Activities needed to meet the desired outcome
- Underlying logic driving the program (program theory or theory of change)

*A complete logic model includes:*

- Inputs – what the program needs
- Activities – what the program does
- Outputs – immediate results of those activities
- Short-term, intermediate, long-term outcomes

It also identifies the contextual and situational factors that influence all of those things.

A logic model need not be fancy or complicated. The number of columns is less important than the distinction between activities and outcomes—this specifies what the program does and what will change because of the program. Inputs, outputs, and situation and context can be added, but only if they add clarity. Remember to identify an *accountable outcome*.

Dr. Kidder provided a listing of example activities and outcomes relating to childhood obesity, based on speakers' presentations previous day (a strawman logic model), and recapped the variety of logic models shown previous day.

## Q&A

*How do you define outputs vs. outcomes?*

Dr. Kidder – Take training as an example activity. The output would be the number of people trained; outcomes would be changes in someone other than the people doing the activity, such as providers having greater self-efficacy in counseling overweight kids/families or more kids being screened for overweight/obesity.

*When specifying outcomes, what should you specify? Is it a priority to use objective measures whenever possible?*

Dr. Kidder – Yes, you need quantifiable measures. Start simple with the objective first, then work on quantifying. Ideally, self-reported data are verifiable through more objective measures. We need to balance level of evidence with the context and what is feasible.

On the issue of dose, so many programs fail because they are not of a scale to have the desired outcome. We need to consider whether a dose is sufficient to make a change, balanced with it being realistic for people to do. What incentives can you give to help people participate?

Dose is often viewed as something done at individual level, but it is also multilevel. What are the multiple components taken together, and what is that overall, combined dose? What does dose mean when we talk about multilevel programs/efforts?

Dose can also mean how many people see a message or participate in a program. For example, preschool kids participating in program five days a week improved more than when kids participated three times a week.

We need to be rigorous in evaluating and planning but not paralyzed by theoretical constructs. How can we test things quickly and see if they have promise and can build on them, or move on to something else?

Regarding EMR data, do we want to think about regional EMR data, such as BMI, as an outcome? And can you make comparisons using those data? For example, if one group gets an intervention and another does not, if you have access to thousands of EMRs in that region, you can compare the groups.

### Instructions for Activity

- Review strawman logic model.
  - Are these the right outcomes?



- Is there some sort of “miracle” occurring between short-term, intermediate, and long-term outcomes?
- Don’t worry about metrics or quantifying changes.
- Focus mostly on short term and intermediate.
- Do not worry about indicators/metrics.

## **Breakout Sessions**

Four moderated breakout sessions were divided evenly between the clinic-community and hospital system models and focused on extending the evaluation framework discussion and responding to the strawman logic model provided.

### ***Clinic-Community Model Breakout A***

**Moderator: Thomas Robinson; Report Out: Brook Belay**

#### *“Meta” long-term outcome: Evaluation as norm*

A missing link in the evaluation picture is creating an environment in which evaluation is “part of the DNA” and a clear understanding of the types of evaluation expected. We need a logic model for establishing evaluation as the norm, in which all funders require evaluation and all hospitals, in their community benefit, consider outcomes when selecting what to invest in. Without evaluation, a lot of programs are reinventing the wheel, but the wheel may or may not be a good one.

- People need to know what and how to measure and how to analyze data. They also need to know how to adjust the program/process in response to the data, when necessary.
- Information systems that allow evaluation and better overall access to data are needed.
- Evaluation data needs to be shared among sectors so we can make linkages (e.g., link school BMI report to data about program reach).
- We need a clearly defined set of metrics and a consistent way of measuring them.
- Consider outcomes for the program and outcomes for the population.
- We need a way to measure effectiveness not only of individual programs but collectively (how the programs are working together).
- Funding is needed specifically for evaluation.

#### *Discussion on Short-term and Intermediate Outcomes*

Short-term outcomes:

- Differentiate between availability of programs and build environmental changes.
- Coalition building
- Senior leadership buy-in

- Establishment of effective partnerships

Intermediate outcomes:

- Reduce sugar-sweetened beverages
- Reduce screen time

*Discussion around Strategies and Activities*

Strategies/settings:

- Community health centers
- Schools, early care and education
- Libraries
- Houses of faith
- Food assistance/food banks, WIC
- Food retail – grocers, restaurants, farmers markets
- Agricultural extension
- Nonprofits in the same sector

Activities:

- Identify target populations: geographic, ethnic, biomarker/BMI
- Build trust—understanding, meeting parents and community where they are
- Partnership building
- Leadership and community buy-in—shared vision
- Create a culture of learning and continuous quality improvement
- Engagement and outreach with individuals, community, advocates—anthropological approach, understand social determinants

*Accountable Outcomes*

- |                           |  |
|---------------------------|--|
| • BMI                     | • Reductions in disparities                          |
| • Program use             | • Stigma   |
| • Implementation fidelity | • Adverse effects                                    |
| • Exposure                | • Co-benefits (e.g., school attendance), Value added |
| • Dose                    |  |
| • Cost                    |  |

## ***Hospital System Model Breakout A***

**Moderator: Jerold Mande; Report Out: Annie Thornhill**

### *Discussion on Short-term and Intermediate Outcomes*

Short-term outcomes:

- Overall, there should be an intention to create overlapping and strategically redundant relationships, e.g., between the individual and community, and individual and health care. It is important to think about the general categorization of the outcomes, especially when it comes to the idea of identifying leadership and buy-in.
- For increased access to healthy options, we need to clarify what and where, e.g., school settings; this will be more specific and make for more accountability.
- We need to increase individual engagement within the community health care system.
- It is important to define what increased buy-in and support look like, and we need to integrate buy-in and support throughout the strategic plan so that it gets included as a pillar and becomes part of people's work plans and hence incites accountability.
- We need to include decreasing access to unhealthy food at the community level, and increasing leadership capacity both at the top level as well as frontline (e.g., if nurses are not supporting the changes then there cannot be proper enforcement and compliance).
- We need to add interim policy measures.

Intermediate outcomes:

- Increasing family cohesion and parenting practices.
- Increasing healthy diet and decreasing unhealthy options.
- Increasing adoption, enforcement, and sustainability of the policy as an intermediate community measure so that once it is passed, it is followed through to the community level.

### *Discussion around Strategies and Activities*

The breakout session participants identified six primary strategies:

#### 1. Improve systems of care.

Activities

- Provider training and awareness.
- Referral to evidence-based programs: These programs need to be bidirectional (between the community and the hospital), embedded in the practice, and well-resourced, and they need to provide incentives for use.

Accountable Outcomes

- Bidirectional relationships
- Provider performance

- Integrated data

2. Serve as culture of health innovators.

Activities

- Hospitals can lead by example (e.g., fitness programs, walking clubs, gardening programs, walking meetings, menu redesign).
- They need to become early adopters, making policy changes for their own culture of wellness and also encourage others.
- Hospitals have their own culinary and food resources, which is a good place to start.
- They should partner to redesign and structure the community (i.e., built environment).
- Encourage consistent messaging across different settings (e.g., portion control, smaller meal size, nutrition education for parents) and align the messaging, so that the outcomes can be tracked appropriately.

Accountable Outcomes

- Policy adoption
- Market data
- Sales and purchases, receipts

3. Become credible community conveners.

Activities

- Lead a capacity-building forum for planning (linking with community health needs assessment).
- Encourage collaborative partnerships (i.e., engage leadership, make sure there are more funding and resources at the end of the meeting).

Accountable Outcomes

- Aligned strategic plan
- Funding and other resources
- Collaborative relationships
- Engaged leaderships

4. Reimburse for evidence-based care.

Activity

- Billing and reimbursement pilots: Conduct pilots for what billing of evidence-based obesity prevention would look like so that we could roll out and advocate for reimbursement reform.

Accountable Outcome

- Evidence of impact

5. Advocate for policy change.

Activities

- Advocate for food, physical activity, and reimbursements (e.g., whole foods, ban the fryer, remove contracting, develop policies around vendors, sugar-sweetened beverages, kids meals).

Accountable Outcomes

- Policy changes
- Access

6. Provide an equity lens throughout all strategies.

Activities

- Target activities should be conducted after a strategic assessment to ensure that all activities have accounted for equity issues.

Accountable Outcome

- Equitable decrease in disparities

Line up measures and outcomes for all stakeholders. Think together about how you can measure outcomes. Think about all partners to include at the table because they will have a co-benefit. Often, the people putting together the intervention are only thinking of what they can measure, but find out what partners can also measure to show impact across multiple sectors.

***Clinic-Community Model Breakout B***

**Moderator: Shale Wong; Report Out: Sarah Armstrong, Stephen Cook**

*Discussion on Short-term and Intermediate Outcomes*

Issues to keep in mind across outcomes:

- Remember disparities and social determinants (e.g., access to care).
- Stratify by age and severity of obesity (primary, secondary, tertiary prevention).
- Match intervention to the expected outcome (BMI maintenance vs. reducing BMI).
- Increase awareness of bias, and reduce weight bias.

Short-term outcomes:

- Community/built environment
  - Include change in home, school, and work environments.
  - Awareness, knowledge, space, and culture.
- Readiness, self-efficacy/competence, and autonomy for providers (and parents and teens, if available)
  - Include change in parent behavior.

Intermediate outcomes:

- Community/built environment

- Include change in home, school, and work environments.
- Awareness, knowledge, space, and culture.
- Readiness, self-efficacy/competence, and autonomy for providers, parents, and teens
  - Include change in parent behavior.
- Community demand

Long-term outcomes:

- Maintain all provider, parent, and teen competencies.
- Disseminate policy and enforcement policy.
- Measure BMI of parents as well as children.
- Investigate targeted universalism (i.e., make sure interventions do not increase existing disparities).

*Discussion around Strategies and Activities*

1. Create and sustain clinic-community partnerships.
  - a. Develop and support intentional and enabled partners.
  - b. Appoint a steering committee (to include parent and youth leadership).
  - c. Offer family training.
  - d. Create learning collaboratives.
  - e. Enable capacity building; offer technical assistance.
  - f. Offer provider training around user experience and motivational interviewing.
  - g. Address bias and awareness of “speaking the same language.”
  - h. Use systems science or “group model building.”
2. Differentiate needs for prevention and treatment and stratify/personalize accordingly.
  - a. Select settings that are age-appropriate.
  - b. Match respective interventions to expected outcomes.
  - c. Consider developmental abilities.
  - d. Conduct targeted messaging and communication.
  - e. Consider the cultural context.
3. Enable effective and transparent communication.
  - a. Maintain effective and transparent communication between clinic/hospital and community.
  - b. Provide language to use with families in both settings.
  - c. Conduct messaging within the community around bias.
  - d. Be consistent with communication across settings.
  - e. Be culturally engaged.

## ***Hospital System Model Breakout B***

**Moderator: Rachel Ballard; Report Out: Janet M. de Jesus**

- A broader title for the logic model was proposed: “Childhood Obesity Prevention and Management.”
- The logic model did not mention schools; the group proposed adding that. There was little clarification on the interim policy measures, except a need to add increasing adoption, enforcement, sustainability of the policy as an intermediate community measure. The group thought that the model can be used by a larger community and not be limited to NIH and CDC.

### *Discussion on Short-term and Intermediate Outcomes*

- Short-term outcomes should inform intermediate and long-term outcomes and be focused on a number of variables/outcomes (e.g., sleep, physical activity, sedentary behaviors).
- Starting with short-term outcomes, participants emphasized having a setting category included in the model: school, day care, early care, child care, out of school, camps.
- Providers need to have a system in place up front, such as electronic health records, incentives, etc.
- In the short-term, obesity should be identified as a priority. Increased availability of community resources is needed up front, if possible, with coverage in place and an increased capacity at the provider and community levels.

The group identified the following outcomes:

- Decreased BMI/Z-score
- Behavior change (kids, family, program):
  - Sugar-sweetened beverage intake
  - Fruits and vegetable consumption
  - Increased physical activity
  - Decreased screen time
  - Sleep
  - Sedentary time
- Value-based care:
  - Increased quality
  - Decreased disparities
  - Decreased costs

### *Discussion around Strategies and Activities*

Identified Activity Areas

- Social marketing
- Address hunger-food security/access
  - Screening/referral, community pantry, worksite/community

- School interventions
- Clinical
- Policy
- Community benefits, needs assessment, policy
- Develop local position statement on how to use community benefits for obesity prevention
- Worksite—model healthy eating/physical activity
- Hospital

#### Identified Strategies

- Align the community and hospital (identity, mission, vision, strategy).
- Target community leaders—policy, CEOs, clinical heads.
- Develop model that aligns actions across all sectors and narrows choices of actions.
- Target health disparities, but also whole population approach (use World Health Organization population approach)—targeted universalism.

#### *Discussion on Policy*

- In the short-term, we need to begin discussing creating a policy, such as re: sugar-sweetened beverages, advertising locally, recess, farm-to-school. In the intermediate, the outcome would be the implementation of the policy.
- Looking at the intermediate outcomes, schools can measure attendance, behavior, self-esteem, self-advocacy, and one long-term outcome—cognitive performance.

The logic model covers the whole area of childhood obesity; there might be need for a separate logic model for treatment of children with severe obesity because the issues are different.

#### **Discussion**

Sometimes this clinical-community model is hospital based, but sometimes health system support is not there.

Where do resources come from to develop these clinical-community relationships? Is there a strong enough arm to the hospital's community benefit reach for them to take this on and do it right? Or is it better funded by a community coalition that works to link community efforts back to clinic? Ideally both—from all angles.

Accountable outcomes run the gamut—from community readiness to BMI. How far down the line we really hoping to get depends on the stage of a given program. We need to set outcome measures that push a little.

We want to get to a point where a community demands a program/service/activity.





## **Wrap Up and Adjourn**

**Elaine Arkin, NCCOR**

- Workshop products
- What will NCCOR do next? (**Rachel Ballard, NIH**)
- Final thoughts (around the table)

## **Next Steps**

Dr. Ballard – Many of the things this group is working on are similar, so there seems to be some consensus building about where there is the greatest evidence/promise in this area. We would like to work with some in this group to develop an actual logic model that could help us move this area forward.

Gap areas –

- Need support for learning collaboratives
- How to include rigorous experimental design in evaluations going forward—what would work in that space, and what metrics would strengthen validity for what we are trying to measure?
- Lack of work with children with intellectual delays and disabilities
- Ability to work with vendors to share data across systems
- Development of interventions that are part of value-added for community and clinical engagement efforts

As initiatives go forward, rather than using a scattershot approach, we need to focus on a few areas to get more in-depth data to see what we can learn. At the same time, we need smaller feasibility studies to show where there is promise. The knowledge base is changing very quickly in this field, so it is important to be able to adapt efforts as they move forward to reflect new findings and insights.

## **Workshop Products**

Dr. Belay – We have many well-established programs and activities. Moving forward, how do we want to present our work over the past couple days to the field? How do we package these products so that those in the field have a better idea of how to evaluate their work?

## **Final Thoughts**

Dr. Yanovski – What about when I only have \$1000 to measure something? There needs to be room for that. Look at the newer evaluation strategies like adaptive design. Small pilots—recognizing their limitations—can still be hypothesis-generating and serve as a base for more intensive studies.

Dr. Cook – The U.S. Preventive Services Task Force has issued evidence for high-intensity treatment, but recommendations are not being followed. The next recommendations coming out are likely to address less severe obesity—they might help with this gap.

Look at communities that are doing work that foundations are putting money into. How can we come alongside them and offer to do evaluation to see how to make those efforts better?

Look at communities that are ripe for obesity-related projects, where there are coalitions and leadership that is receptive to prevention programs, but where childhood obesity has not been a priority. Addressing obesity where it is a new topic could provide a better venue for evaluation because there is not a lot already going on.

Dr. Wong – Is there an opportunity for technical assistance (TA) for evaluation to help more communities do evaluation in consistent way and provide better measures across communities?

Dr. Robinson – We need a logic model for making evaluation the default. One part might be TA. In this model you would have a whole set of activities and outcomes to achieve an evaluation culture. We have not seen a lot of change in hypothesized outcomes; it is time to move to other models, for instance, that incorporate social determinants of health. We could do a lot of work and find our models are all wrong. For example, the health and medical world may not have as big a role as we think they do.

NCCOR has the platform to present hypotheses that can be tested vs. trying to put out guidelines and recommendations over and over.

Dr. Pont – Often there is competition among sectors and organizations in same sectors. Is there a framework that can support and even incentivize collaboration?

Dr. Armstrong – A lot of the research frameworks we have talked about are based on patient-centered/community-centered outcomes. Why is PCORI (Patient-Centered Outcomes Research Institute) not at the table?

Dr. Belay – PCORI focuses on comparative research, comparative effectiveness.

Dr. Ballard – Look at Next D, a PCORI/CDC/NIH collaboration focused on evaluating natural experiments in clinical care for how to manage diabetes. NIDDK is the NIH partner. Are there any parallels that would be relevant to NCCOR work?

Dr. Cook – There are two large obesity studies funded by PCORI, both in primary care settings, looking at rural and urban populations. PCORI did fund a pediatric network of children's hospitals, and there was an obesity piece, but it was not funded for a second round. There is already an engaged group of children's hospitals or large pediatric departments. This might be an opportunity.

Dr. Kidder – It is tough to shift the culture at CDC and among grantees to encourage a focus on evaluation. We get pushback that money needs to go to programs and the people; we do not have money for evaluation, and we do not need it because they already know it works. But all CDC funding announcements require an evaluation component. We need to encourage programs to show the importance of data that can be aggregated across communities/states. Whatever we can do to show the importance of collecting data and show the value of what we are doing is beneficial.

### **Closing**

Ms. Arkin – Slides will be sent out, along with papers that were not included in the e-portfolio, after the meeting. Anyone with something to share with the group should send it to Mari Nicholson and/or Jordan Broderick, and they will send out the package to the group. The group was encouraged to share NCCOR materials with others who should know about the Collaborative.