

## MEETING SUMMARY

### National Collaborative on Childhood Obesity Research (NCCOR) Member Meeting

Thursday, March 3, 2022 | 1:00–3:00 p.m. ET

<b>CDC:</b> H. Blanck, E. Boundy, C. Dooyema, K. Hall, H. Hamner, D. Harris, L. Kettel Khan, S. Hee Lee, K. Marks, L. Moore, J. Nelson, S. Onufrak, A. L. Warnock, H. Zaganjor, L. Zhao	<b>USDA:</b> M. Abley, M. Ehmke, J. Guthrie, M. Hill, L. Jahns, J. Obaggy, P. Pehrsson, L. Rahavi, B. Restrepo, C. Sideck, M. Spill, S. Toossi
<b>NIH:</b> S. Calabrese, M. Chaunt, K. Clevenger, H. D’Angelo, L. Donze, L. Dwyer, L. Esposito, S. George, A. Korn, B. Kowtha, R. Kuczmarski, L. Nebeling, C. Pratt, S. Yanovski, J. Zink	<b>Coordinating Center (CC):</b> E. Callahan, L. Canady, V. Do, R. Grimsland, K. Hilyard, T. Philips, A. Sharfman, M. Van Orman, S. Xiong
<b>Robert Wood Johnson Foundation:</b> K. Hempstead, N. Holtz	<b>Other:</b> D. DeSilva (HHS), R. McKinnon (FDA)
<b>Guest Speakers:</b> <ul style="list-style-type: none"> <li>• Samantha Lange, MPH, Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity</li> <li>• Steve Gortmaker, PhD, Harvard University School of Public Health</li> <li>• Alexandra Chung, PhD, Monash University School of Public Health and Preventive Medicine, Australia</li> </ul>	

#### Welcome, Introduction, NCCOR Updates – Karen Hilyard, NCCOR Coordinating Center

K. Hilyard welcomed participants, reviewed the agenda, highlighted the primary purpose of the meeting—to explore the impact of the pandemic on childhood obesity—and shared NCCOR updates and accomplishments. She highlighted several NCCOR resources:

- [NCCOR.org/internalresources](http://NCCOR.org/internalresources) – Find key NCCOR documents, summaries and slides from past member meetings and calls, highlights of NCCOR activities and accomplishments, past annual reports, an overview of active workgroups, NCCOR 101 resources (a slide set and a 2-page FAQ document about how NCCOR operates and the benefits to participating in the collaborative), and more.
- The 2021 Annual Report is now available [here](#)!

#### NCCOR External Scientific Panel (NESP) Meeting Summary – Todd Phillips, NCCOR Coordinating Center

T. Philips reviewed highlights from a November 2021 webinar during which NESP<sup>1</sup> and Steering Committee (SC) members discussed NCCOR’s post-pandemic opportunities to reduce prevalence of childhood obesity. Participants suggested that NCCOR:

- Examine the pandemic’s effects on factors related to child health and obesity, and the implications of those effects during the next 2-3 years. For example, what are the weight-related effects of pandemic-driven societal changes that may become permanent, such as revisions to WIC food packages? Will the pandemic-related rate of increase in obesity prevalence remain consistent or revert to pre-pandemic levels?

<sup>1</sup> NESP is an external expert group that advises NCCOR on its future direction and provides guidance on specific projects or emerging work. For additional information and roster: <https://www.nccor.org/about/nccor-external-scientific-panel/>

- Seek lessons from other developed countries' response to childhood obesity in the wake of the pandemic, including interruptions to surveillance and data collection.
- Explore strategies to promote continued data collection during future pandemics or other national emergencies, which could include preparing back-up/alternative methods such as pulse surveys, system administrative data, or electronic health record data.
- Focus on obesity treatment: integrate primary and secondary treatment/prevention models, review new American Academy of Pediatrics treatment guidelines for research needs re: insurance coverage policies, discuss how to bridge the gap between intervention development and application, and assess food and activity environments to help evaluate which treatments work better than others.
- Compare pre- and post-pandemic school food and activity environments, e.g., are PE and recess being sacrificed post-pandemic to catch up on learning losses?
- Explore multi-sector solutions that concurrently impact childhood obesity and other societal challenges such as climate change.

**Panel: Exploring the Impact of the Pandemic on Childhood Obesity**

Moderator: *Kathy Hempstead, Robert Wood Johnson Foundation (RWJF)*

Guest Speakers:

*Samantha Lange, MPH, Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity*

*Steve Gortmaker, PhD, Harvard University, School of Public Health*

*Alexandra Chung, PhD, Monash University, School of Public Health and Preventative Medicine, Australia*

S. Lange presented on her work on longitudinal trends in childhood obesity before and during the COVID-19 pandemic. Her report was published September 17, 2021, in [MMWR](#).<sup>2</sup>

- **Background:** Approximately 14 million youth (almost 1 in 5) aged 2–19 years had obesity according to NHANES 2017–2018. The COVID-19 pandemic led to child care and school closures with corresponding disruptions in routines, increased family stress, and potentially fewer opportunities to access nutritious foods and physical activities (e.g., because schools and child care settings typically provide supportive infrastructure for healthy eating and physical activity). The pandemic created conditions hypothesized to drive weight gain among U.S. youth and disrupted long-standing surveillance systems for child weight (such as NHANES). This created an opportunity for electronic health records (EHRs) to fill the gap and provide timely access to data.
- **Methods:** [IQVIA](#)'s Ambulatory Electronic Medical Records database was used to compare rates of change in body mass index (BMI, kg/m<sup>2</sup>) among 432,302 youth aged 2–19 years before and during the COVID-19 pandemic (January 1, 2018–February 29, 2020 and March 1–November 30, 2020, respectively). Data were drawn from 100K providers from >800 sites.
  - Participants had ≥2 BMI measures during the pre-pandemic period (with ≥1 BMI in the year immediately preceding the pandemic) and ≥1 BMI during the pandemic period.
  - An automated tool called [growthcleanr](#) was used to clean longitudinal growth data from EHRs, and a data visualization tool called [GrowthViz](#) was used to support post-processing of growthcleanr data (i.e., to help users decide how to handle data errors).

<sup>2</sup> Lange SJ, Kompaniyets L, Freedman DS, et al. Longitudinal Trends in Body Mass Index Before and During the COVID-19 Pandemic Among Persons Aged 2–19 Years — United States, 2018–2020. *MMWR Morb Mortal Wkly Rep* 2021;70:1278–1283. DOI: <http://dx.doi.org/10.15585/mmwr.mm7037a3>.

- *Key findings:* Compared with pre-pandemic data, the monthly rate of BMI change nearly doubled during the early pandemic (March–November 2020) for participants in all BMI categories except underweight.
  - Largest rates of increase were observed among children with overweight and obesity, children aged 6–11, and males.
  - Estimated prevalence of obesity among children 2–19 years rose to 22.4% by August 2020, compared with 18.4% in August 2018.
- *Discussion:* Three other U.S. studies that used youth EHR data during a similar time period also indicate that pediatric BMI gain increased substantially during the early pandemic through 2020. Children most affected include those with pre-existing overweight/obesity, Black and Hispanic children aged ~5–12 years, and children with public insurance.<sup>3,4,5</sup>
  - If these children retain excess adiposity, it could adversely affect future risks for metabolic abnormalities, chronic disease, and severe illness from infectious disease such as COVID-19.<sup>6</sup>
  - Future evaluation should assess the (unintended) effects of COVID-19 mitigation efforts, such child care and school closure and waivers/programs to help families access food and activity, and use timely data to assess if similar changes in weight gain persist.

S. Gortmaker discussed the CHOICES (childhood obesity intervention cost-effectiveness study) project and a recent, related [BMJ article](#) on effective programs and policies to reduce risk of childhood obesity in the wake of COVID-19.<sup>7</sup>

- Evidence suggests that programs and policies implemented in recent years have helped moderate the rise in childhood obesity, particularly in WIC populations (following changes to WIC food packages)<sup>8</sup> and children from households with lower incomes (following implementation of the Healthy, Hunger-Free Kids Act and its impact on school meals).<sup>9</sup>
- To reverse the pandemic’s impacts on childhood obesity, cost-effective prevention strategies are critical (as were strategies used to control the pandemic, such as masks and vaccines).
- We can do more than simply return to pre-COVID trends in childhood weight gain—we have a chance to build back better, with a focus on cost-effective strategies that promote population health and health equity.
- The article highlights three evidence-based approaches identified as “double duty” actions—i.e., simultaneously dealing with the common drivers of overweight, obesity, and undernutrition across countries of all levels of development in three areas: 1) providing healthy food and physical activity environments for preschool and school age children, 2) reducing children’s

<sup>3</sup> Woolford SJ, et al. Changes in body mass index among children and adolescents during the COVID-19 pandemic. JAMA. August 2021. <https://jamanetwork.com/journals/jama/fullarticle/2783690>

<sup>4</sup> Jenssen BP, et al. COVID-19 and changes in child obesity. Pediatrics. May 2021. <https://pediatrics.aappublications.org/content/147/5/e2021050123>

<sup>5</sup> Brooks CG, et al. Pediatric BMI changes during COVID-19 pandemic: An electronic health record-based retrospective cohort study. E Clinical Medicine. August 2021. <https://doi.org/10.1016/j.eclinm.2021.101026>

<sup>6</sup> Kompaniyets L, et al. Underlying Medical Conditions and Severe Illness Among 540,667 Adults Hospitalized With COVID-19, March 2020–March 2021. [https://www.cdc.gov/pcd/issues/2021/21\\_0123.htm](https://www.cdc.gov/pcd/issues/2021/21_0123.htm).

<sup>7</sup> Chung et al., Reducing risk of childhood obesity in the wake of covid-19. BMJ 2021;374:n1716. <https://www.bmj.com/content/374/bmj.n1716.long>

<sup>8</sup> Daepp MIG, et al. WIC Food Package Changes: Pediatrics. 2019 May;143(5).

<sup>9</sup> Kenney E, et al., Impact of The Healthy, Hunger-Free Kids Act on Obesity Trends. Health Aff (Millwood). 2020 Jul;39(7):1122-1129.

exposure to unhealthy food marketing, and 3) imposing an excise tax on sugary drinks. Implementing these strategies relies on effectively translating science into action. A related strategy is eliminating the tax subsidy for advertising unhealthy foods and beverages to children.

S. Chung provided an Australian perspective on COVID-19 and childhood obesity and supplemented S. Gortmaker's comments on key areas for action described in the BMJ article (as well as in a World Obesity Federation [policy brief](#)).

- Compared with the United States, Australia's border closures and national restrictions on social gatherings were more extensive (e.g., residents of Victoria experienced six lockdowns totaling 263 days), but vaccine uptake has also been more extensive in all eligible age groups.
- Childhood overweight and obesity affected 25% of Australian children 2–17 years pre-pandemic, with higher obesity rates among children in disadvantaged areas (11%) compared to high socioeconomic areas (4.4%).<sup>10</sup> The pandemic disrupted surveillance of childhood weight.
- The article's authors were challenged to identify decisive interventions in complex systems to halt the childhood obesity epidemic. They examined the impact of four categories of COVID-19 mitigation measures on children: stay home orders and home schooling, targeted food and drink marketing, food access and supply challenges, and social isolation and poor mental wellbeing. This led to the focus on the three evidence-based, cost-effective areas for action: promoting healthy school food and physical activity environments, curbing marketing for unhealthy foods and beverages, and taxing sugary drinks.
- Three strategies were recommended moving forward: apply a children-first approach by framing the need as a child's rights issue, particularly in the food marketing space; continue to accumulate evidence to present to decision makers; and enhance monitoring and surveillance of obesity and its risk factors.
- This year's World Obesity Congress is in Melbourne, October 18–22 (abstract deadline April 13).

### Q&A with Panelists

*K. Hempstead: What viable strategies do we have to counteract food and beverage marketing to kids?*

- S. Gortmaker: Prior strategies in this area have had limited success. Marketing and advertising restrictions are a challenge in the United States because of issues related to commercial speech and the First Amendment, and because it's hard to keep up with all the new ways that companies market to kids, especially tactics based around social media. More research about the harmful effects of marketing on children's health could help.
- A. Chung: Another little-explored area is how children's data are used for targeted marketing. To Steve's point about digital media, another challenge is marketing via social media influencers. Restrictions on businesses' marketing practices would likely not apply to influencers.

*K. Hempstead: What are some of the challenges associated with using EHR data?*

- S. Lange: Findings from health care-seeking populations cannot be extrapolated to the population as a whole, because these are different groups of people. Nonetheless, in the absence of other data, we can do our best to make EHR data useful. IQVIA is not nationally representative, but its strengths are that it provides a wealth of data from a large sample set, and that it followed the same population of children over time (vs examining cross-sectional samples of children pre- and during COVID, which might not be comprised of the same children).

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<sup>10</sup> Australian Institute of Health and Welfare 2017-2018 (slide 58)

*L. Donze: Did patients in the IQVIA data set provide consent or know their data would be analyzed?*

- S. Lange: I am not sure. IQVIA data are de-identified before researchers are able to access them. The most granular data available are a patient's age, sex, race/ethnicity, and the first three digits of their residential zip code.

*C. Pratt: Were there challenges to harmonizing data from multiple EHRs?*

- S. Lange: IQVIA obtains identifiable data from ~100K providers across numerous U.S. sites and then processes and de-identifies the data before placing them on a platform that researchers can access, so data are already kind of harmonized at that juncture.
- K. Hempstead: RWJF recognizes the richness and timeliness of EHR data and is beginning a project that aims to create a public resource where researchers can access these data for their research.

*L. Donze: What will it take to prohibit products like sugary drinks from being bought with SNAP benefits?*

- S. Gortmaker: This is a complicated and sometimes controversial issue (e.g., hunger advocates have raised concerns about restricting certain SNAP benefits uses) and is a contrast with the WIC program, where only certain foods are eligible for purchase with benefits and researchers have evaluated the effects of changing eligible foods. USDA administers the SNAP program and already restricts certain purchases from being made with SNAP benefits (e.g., tobacco, alcoholic beverages, hot prepared foods). Some states have unsuccessfully tried to get waivers to test additional restrictions (e.g., sugary drinks) on purchases made with SNAP benefits.

### **Discussion: What's new and different for NCCOR as a result of the pandemic?**

Moderator: *Karen Hilyard, NCCOR Coordinating Center*

Participants raised potential topics for NCCOR consideration that included restricting access to sugary drinks; documenting lived experiences as a strategy to drive policy change; focusing on vulnerable groups' assets to promote resilience instead of their deficits; considering the role of policy incentives to promote fruit and vegetable purchasing and consumption; examining the mental health impacts of COVID on health outcomes; and strengthening surveillance and exploring alternatives to traditional data sources.

- L. Donze: Use evidence about adverse effects of sugary drinks on child weight/health to promote policy changes to limit access to these beverages.
- A. Chung: Consider mixing up our approach to advocacy by harnessing peoples' lived experiences to appeal to the hearts of decision makers. [Corinna Hawkes](#) is leading a [body of work](#) in this area at City University London. She seeks insight into the challenges of food decision-making that families with limited resources face. Need to be careful of privacy issues; some people want to remain anonymous.
- M. Ehmke: Need more research on the diversity of lived experiences across different vulnerable populations (various racial/ethnic and socioeconomic groups). Instead of focusing on a group's deficits, let's examine success stories to assess what made a difference for those families.
- S. Gortmaker (answering question from B. Kowtha): Programs to incentivize fruit and vegetable purchases at farmer's markets with SNAP benefits have shown some success but are not always well-sustained; someone has to pay for this extra subsidy and supportive local infrastructure is

needed. The bigger policy question relates to how to prioritize healthier, sustainable diets through federal agricultural subsidies, Farm Bill provisions, etc.

- J. Guthrie: USDA’s [Healthy Incentives Pilot \(HIP\)](#) is probably the best-controlled study of incentivizing fruit and vegetable purchases at farmer’s markets and other retailers among consumers with low incomes. It was associated with increased fruit and vegetable consumption among adults. Another [similar program](#) is underway through USDA. Although these programs may not have a big impact on obesity, it’s important to consider the other health benefits of fruit and vegetable consumptions.
- K. Gibbs: What are the health and weight effects of pandemic-related stress in children?
- B Kowtha: Could NCCOR evaluate this through school-based health centers?
- S. Lange: [Data are available](#) on mental health-related emergency department visits among youth during the pandemic.
- S. George: Some areas of the cross-agency focus on resilience at the federal level may overlap with NCCOR goals (e.g., physical activity promotion among youth). We could engage colleagues who have expertise in measuring the concept of resilience. // If longitudinal data sets like IQVIA became more accessible, they would provide a powerful natural experiment design to evaluate policy changes with large numbers of participants.
- K. Clevenger (NCI): The pandemic highlighted the lack of surveillance of school-related policies and practices that affect eating and physical activity.
- C. Pratt: Enhancing parenting skills to reduce prevalence of childhood obesity.

**Wrap-up**

K. Hilyard reviewed dates for upcoming NCCOR member calls and meetings. The June member meeting theme is data modernization, especially as it relates to childhood obesity and equity. NCCOR is seeking representatives from each NCCOR member agency to share their organization’s data modernization efforts, along with speakers for another panel of experts who will explore the future of the field and opportunities to fill gaps. Please contact the Coordinating Center with names of experts in your agency and in the field.

<p><b>2022 Member Calls</b> April 20   May 18   July 20</p>	<p><b>2022 Member Meetings</b> June 15</p>
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