Harvard Catalyst Childhood Obesity Initiative: Framing the Goals of Meeting

Karen Emmons
Why focus on childhood obesity when there is already so much strength at Harvard in this area? The purposes of this meeting and this initiative are to: 1) inventory research that is already taking place at Harvard in childhood obesity; 2) consider how to add value to this strong base; 3) facilitate connections and collaboration among researchers across the University; and 4) develop an RFP for pilot grants to facilitate new translational research on childhood obesity with a population focus.

Lee Nadler announced Harvard Catalyst’s commitment of $450K in pilot grants: $50K in direct costs per grant, with up to 9 awards. There is a possibility for pilot grants to be complementary, and for a second year of focused pilots.

Three Perspectives on Childhood Obesity: Research Gaps and Opportunities

Walter Willett
Obesity is a consequence of unfettered capitalistic food supply, driven by product development to encourage over-consumption, high quality research on marketing, unrestrained advertising that penetrates vulnerabilities, especially of children, and more inactive time spent in front of the television and computer. In order to combat these forces, we need more research and information on diet quality (for example, more fruits and vegetables may not impact obesity but the type of fruit and vegetables may), the role of advertising, working with lawyers to build a better case against food industry excesses, and multi-faceted interventions that will produce a larger effect. While there is much individual variability in response to diet and exercise, and we do need to learn more about the relative contribution of genetics, cultural/social, and other factors, the 800 pound gorilla in the room is an 800 pound Coke can.

David Ludwig
Focusing on children requires focusing on families. Poor diet in the home is analogous to secondhand smoke; hazards to children are taken seriously. It is easier to make small changes in eating behavior in childhood than larger changes in adulthood, but benefits of much childhood obesity research take longer to realize, with implications for objectives and their measurement. Body weight is affected by the quality of food, environment, family dynamics, politics, and safe environments for exercise. The challenge is to create truly multidisciplinary interventions because simple educational interventions are
usually not effective. We need behavioral interventions based on improved physiological understanding. Food has been transformed from that which is grown in nature, to ultra-processed substances, resulting in fast digestion, surge in hormonal release, and dysregulation of metabolism. We need a more precise understanding of how dietary composition affects biology, how to motivate people, and how genes influence body weight phenotype. Harvard Catalyst can form an interdisciplinary working group to design and evaluate strong, innovative interventions that integrate environmental, clinical, genetic and other knowledge we have or need. Harvard’s gravitas enables it to speak with a clear and authoritative voice to break through the conflicts of interest that compromise children’s health.

Lauren Smith
One third of MA’s school-aged children, or half a million youngsters, are obese or overweight. We need a population-based, public health perspective to address this population. We cannot keep doing things with small groups of children. We have a challenge to think about scale and reproducibility to reach all those children. In addition, we need a more robust understanding of community/neighborhood-level levers to effect change, and a focus on emboldening individuals and communities. We need to address behavior and environmental change; decrease toxicity of environment, which includes lack of neighborhood safety (affects ability to exercise), and corner stores and food trucks (which provide constant temptations). We especially have to understand what works, and why – we need lots of help in measuring the effects of policy changes. We also need to focus on some concrete processes that are not sexy but are well within our powers – e.g., procurement and contracting authority, the flexible and shared use of public facilities – to effect large changes in the food and activity resources available to children and youth.

Summary of Themes from Breakout Groups: Reactions, Integrations, Inspirations

Food Industry: Industry spends vast sums on creative and sophisticated strategies to market unhealthy food to consumers in toxic quantities. Corporations are very effective in shaping culture; people are manipulated to want and buy unhealthy foods and large portions as the default choices. Yet it is government that is accused of creating a “nanny state” that regulates and inhibits choice. How can the public health community combat this image and take advantage of people’s (especially young people’s) desire for free choices and resistance to manipulation?

Industry will strongly resist change, but it is not monolithic. It may be best to focus on retailers rather than corporations that manufacture and market. It may be possible to align incentives, e.g., reducing portion size may be a win-win if they can sell smaller portions at the same price without decreasing consumer perception of value (as has happened in many upscale restaurants). Retailers make more on fresh produce than on brands, if they can better avoid waste; they are also concerned with the health and productivity of their own workforces. Industries of interest are not only the food industry, but also industries that discourage physical activity (autos, elevators) and the diet industry, which is virtually unregulated. Public health will always be at a disadvantage because of industry’s vast economic and political resources; yet partnerships may be possible in some cases, and it will always be necessary to understand industry’s strategies and secrets and exploit their excesses.

Comparison with Tobacco: Regulation (of advertising, taxation, of where smoking is permitted and prohibited) was a key to changing smoking behavior. Also, accumulated evidence of the hazards of exposure to second-hand smoke showed innocent children to be the victims of industry manipulation and adult behavior, and helped make policy changes possible. To achieve healthier eating patterns in children we have to access families; conversely, it is most feasible to reach many adults through their roles as parents and grandparents. How do we stop parents from enabling children’s weight gain?
It is often said that the difference is that you have to eat, but you don’t have to smoke. Also there are many different kinds of food, so there is no simple message analogous to “Stop Smoking.” But like tobacco, sugar-sweetened beverages are only harmful, and make a major contribution to the obesity epidemic. State, not just local, regulations are necessary; but after all these years and all the evidence, there are still states that do not have bans on smoking. Successful statewide campaigns against SSBs will likely need to build at the local level with relatively small numbers of outraged people. Starting at the local level, we are not in the line of fire for Coke and Pepsi and can rise up a bit without getting noticed. And there are spaces and opportunities for information transfer that we do not now use (e.g., doctors’ and dentists’ offices) that could be helping to build buy-in to the evidence base.

**Policy:** There is good evidence that the most cost-effective approaches to address obesity involve policy and regulatory strategies. Building the evidence base, political will, and social strategies to change norms and policies requires coordination, stamina, and resources. It is essential that large institutions lead by example. For instance, it would have major impact if sugar sweetened drinks were no longer sold at Harvard, just as Mayor Menino’s initiative will remove sugar sweetened beverages from all city property. Come August, Massachusetts will have in place the best statewide competitive food regulations in the country. HC grants should evaluate these policy innovations and other large scale natural experiments like the CDC-funded Childhood Obesity Research and Demonstration (CORD) project and the Community Transformation Grants, which target 35% of the Commonwealth’s residents. Federal, state and city government have invested enormous resources in these community-based interventions, and they have substantial and varied community engagement – but they lack funding for the rigorous evaluation they need. Childcare licensure requirements and other legal and contracting approaches are also important to evaluate.

Improved measures and strong baseline data are needed to measure the effects of policy changes and multi-faceted interventions, another area where HC can make important contributions. Regulatory and statutory policies that are adopted locally, ad hoc and piecemeal, may have small effect sizes. A “package” of interventions may be necessary to register impact, but will be much harder to achieve; but there may be opportunities to evaluate together the comparable policy changes in multiple communities, none of which have the bandwidth to measure on their own. Currently, 9 out of 10 health departments nationwide report collecting valuable data but only a few have the resources and capacity to analyze the data. They also worry about the legal liabilities in new policy initiatives because they cannot risk the lawsuits that may ensue. Still, about 5% of local health departments influence the rest. MA is a state with a great deal of influence; we can design policies that will have good chances of spreading.

**Areas of interdisciplinary interest:** Why do some people do well and others poorly in a toxic food environment? One explanation is genetic. We might learn valuable lessons from those who are “resistant” to obesity, currently an under-studied population. As the environment becomes more uniformly obesogenic across populations, 50-70% of the variation in BMI maybe genetic. Behavior and physiology are programmed early; there are key periods for setting various trajectories. A life-course perspective examines the different risks that people face at different times, how they respond to those risks, and how to intervene in opportune ways at multiple points. Behavioral economics is another discipline that has promising applications to childhood obesity: What incentives can various players (retailers, employers, child care, school, and after-school settings, clinicians, government) use to achieve specific objectives related to childhood obesity? Different populations respond differently to any strategy; many in the Black community block out advice seen as coming from the white community. Few strategies and messages work across deep cultural divides; they have to be tailored, and individuals from the cultures and communities with significant health disparities, including African Americans,
Latinos, youth, and immigrants, must be involved in all stages, from conceptualization to evaluation. Social change strategies must also be grounded in understanding and respect for competing belief systems that for many people are more plausible, pleasurable, practical and preferable to the science-based explanations and guidance that the medical and public health community provides.

For all of these reasons, broadly interdisciplinary collaboration is required; but academic silos discourage such collaboration because of inadequate incentives, proliferating and fragmented knowledge bases, and lack of exposure to highly relevant research published in journals from other fields (e.g., *Journal of Consumer Research*). In particular, engaging and coordinating with faculty and students from the Harvard Law School’s Center for Health Law and Policy Innovation, Harvard Business School, Harvard Kennedy School, and the social sciences is a Catalyst priority. Participants were asked to respond to a networking questionnaire enabling us to map the baseline and changes in social networking among those involved in childhood obesity research at Harvard and community partners.

**What can Harvard Catalyst and its Pilot Grants contribute?**

- Address measurement issues: Is BMI a culturally appropriate and accurate measure? How can evolving databases such as all-payer claims database, electronic medical records, and integrated early childhood databases better lend themselves to obesity prevention?
- Map the ‘gauntlet’ to better understand the environment kids live in; geocode addresses from EMRs, map neighborhoods and influences: Better surveillance instruments for better baseline data.
- Generate novel ideas and promote unconventional collaborations among economists, psychologists, anthropologists, linguists, city planners, technology wizards, etc. and make literature more widely available across disciplines.
- Continue to strengthen ties between policy and research, with a particular emphasis on evaluating natural experiments created by policy change, and exploring regulatory, statutory, contracting and other administrative remedies.
- Develop teams and ideas for larger and longer studies that can take a life course perspective and aim for a larger impact.
- Engage the various people and settings prominent in children’s lives, and work with the partners most ready to work at scale; for example, the Department of Early Education and Care.
- Harvard and its partners employ about 225,000 people; they can be the source of creative ideas, and they can also be the beneficiaries of a coordinated strategy to improve the food environment.
- Develop the science to support a multi-faceted state-wide campaign against sugar-sweetened beverages and junk food.
- Explore theory and research informing how to shift the discourse from “interfering with the rights of adults” to “protecting children against exposure and exploitation.”
- Include global perspective, recognizing that obesity is a global problem, policies and industry strategies have global implications, and there may be much to learn from approaches to obesity prevention in other countries.
Childhood Obesity Pilot Grants might specifically encourage:

- Understanding and reducing disparities
- Early childhood interventions
- Life course research
- Evaluating natural experiments and policies
- Use of electronic medical records and all-payer claims database
- Interdisciplinary and cross-institutional collaboration
- Intentionally complementary proposals
- Working with HBS to engage industry, feature behavioral economics
- Development of tools and resources
- Affordable, replicable, cost-effective strategies
- Working with HLS on regulatory/contracting/procurement and other legal/policy strategies
- Enhancing surveillance capacity
- Targeting SSB’s