

Blueprint for Accelerating Progress in Childhood Obesity Prevention in Chicago: The Next Decade

Consortium to Lower Obesity in Chicago Children



Introduction

The nation's childhood obesity rate has more than tripled over the past 30 years, and the impact of this epidemic on Chicago children has been especially severe.⁽¹⁾ Chicago's obesity rate for young children starting school in 2008 was 22%, more than twice the national average. The rate of obesity among Chicago children starting sixth grade was 28%, or nearly one and a half times the national average.⁽²⁾ In some Chicago neighborhoods, primarily those with average household incomes lower than the citywide average and a majority of African American or Hispanic residents, closer to half of the children are overweight or obese; and in some neighborhoods, even more.^{(3) (4)} These data illustrate not only a significant problem across the city, but also a significant problem of disparity and health inequity that must be addressed.

At its core, obesity is the result of a calorie imbalance. When people consume more calories through food and beverage than they expend through metabolism, growth, and physical activity, their body mass index (BMI), a ratio of weight to height, increases. For children, a BMI in the 85th to 95th percentile for children of the same age and sex (compared to standards set decades ago by the nation's health leaders) is "overweight." A BMI above the 95th percentile is considered "obese."

Children burdened with obesity endure negative physical, emotional, and social consequences. Overweight and obese youth are more likely to have type 2 diabetes, high blood pressure, liver disease, and asthma. They experience musculoskeletal problems as they grow, may suffer dermatologic problems, and often have significant problems sleeping due to obstructed breathing disorders. Overweight and obese children are also more likely to experience bullying and depression, to be absent from school, and to have poorer academic outcomes. Childhood obesity results in an economic burden as well, including \$14.1 billion in obesity-related direct medical costs annually nationwide.⁽⁵⁾ Children who are obese are more likely to be obese as adults and therefore at higher risk for stroke, cardiovascular disease, certain cancers, and premature death. Researchers predict that today's youth may be the first generation to have shorter life spans than their parents.^{(1) (6)} And adult obesity costs the U.S. \$270 billion a year and Illinois \$3.4 billion a year.^{(7) (8)} Investment in prevention, therefore, is an investment in our future.

Ten years ago, in response to a growing body of evidence documenting the significant increase in childhood obesity and its grave consequences, representatives from approximately 40 diverse organizations and city agencies across Chicago came together under the leadership of Dr. Katherine Kaufer Christoffel, then a pediatrician at Ann & Robert H. Lurie Children's Hospital of Chicago (formerly Children's Memorial Hospital), with support from the Otho S. A. Sprague Memorial Institute to explore the possibility of establishing a multi-sector coalition to take on Chicago's obesity rate for young children starting school in 2008 was



national average.

childhood obesity. Their plan called for a coordinated, comprehensive, and community-based approach. The Consortium to Lower Obesity in Chicago Children (CLOCC) was born out of these exploratory discussions. CLOCC established its mission – to confront the childhood obesity epidemic by promoting healthy and active lifestyles for children throughout the Chicago metropolitan area – and committed to fostering and facilitating connections between childhood obesity prevention researchers, public health advocates and practitioners, and the children, families and communities of Chicagoland. CLOCC's original partners and leaders set five broad goals, updated in 2007:

- To improve the science and practice of childhood obesity prevention.
- To expand and strengthen the community of public health practitioners, community leaders and organizations, clinicians, researchers, corporations, and policymakers working collaboratively to confront childhood obesity in Chicago and beyond.
- To expand the 5-4-3-2-1 Go![®] public education campaign to shift our local culture toward one that supports lifestyle measures that will bring about reduction in childhood obesity in Chicago.
- To cultivate a long-term, broad base of government, philanthropic, and industry funding to sustain childhood obesity prevention work in Chicago and beyond.
- To identify culturally appropriate and relevant childhood obesity reduction approaches that work and disseminate and institutionalize them at all levels of social ecology (individual, family, community, institutional, public policy).

Today, the consortium is comprised of more than 3,000 individuals representing over 1,200 organizations working on childhood obesity prevention in Chicago, across Illinois, throughout the nation, and beyond. Tens of thousands of individuals make use of CLOCC's website and online resources and receive regular communications on emerging and established best practices in a wide range of obesity prevention strategies. These individuals are located as close as Chicago's most affected neighborhoods and as far as the UK, Europe, and Australia. Working together, CLOCC staff and partners have implemented numerous programs, projects, and policy initiatives to increase individual and family knowledge about healthy lifestyles, strengthen organizational and institutional practices to support healthy eating and physical activity, and improve environments so that healthy food and physical activity are widely available where people, and especially children, live, work, learn, and play. As a result, Chicago achieved a statistically significant decrease in obesity among children entering school, from 24% to 22%, over five years.⁽²⁾ Though reductions in obesity rates among the youngest age group reflect an emerging national trend, Chicago was among the first major urban centers to document such a change, due both to CLOCC's coordinated approach to combating the epidemic and because of our capacity as a city and consortium to collect, analyze, and disseminate such information.

While this reduction is encouraging, more work remains to be done – the burden of obesity and its associated negative outcomes on our city's youth are still far too great. As we celebrated our first decade in 2012, we also set out to envision the future. We considered the question, "What strategies and steps must the Chicago community pursue to promote health and reduce obesity among Chicago youth?" Marice Ashe, Chief

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Executive Officer of ChangeLab Solutions, said at CLOCC's September 2012 Quarterly Meeting, "When [the childhood obesity prevention movement] began, we planted 1,000 seeds to see what would bloom." At CLOCC, we believe that the national and local experience and evidence base have progressed to a point that it is time to cultivate and pick the most promising fruits (and vegetables!) of our labor and put them front and center as we begin our second decade of collaborative work. CLOCC looks forward to the next ten years of childhood obesity prevention in Chicago, and we share this *Blueprint for Accelerating Progress in Childhood Obesity Prevention in Chicago: The Next Decade* to provide some focus for the decade ahead.

Methodology

To craft a blueprint for accelerating progress in the next decade of childhood obesity prevention in Chicago, CLOCC engaged its leaders, staff, and partners to review the most promising strategies.

- At a meeting in the summer of 2012, CLOCC's External Advisory Board – national experts representing research and policy institutions, hospitals and healthcare providers, community-based organizations, schools, childcare providers, and other youth-serving organizations – assessed evidence-based approaches to promoting healthy and active lifestyles for children and recommended best practice approaches to CLOCC staff. CLOCC staff set the national best practices in the context of local experiences. These two groups, along with CLOCC's Executive Committee – local experts representing Chicago organizations with missions that advance the childhood obesity prevention agenda – developed a draft set of focused approaches based on this national and local information.
- At a staff retreat, CLOCC staff reviewed these potential strategies and drew from other national recommendations and reports, (e.g., the Institute of Medicine's Accelerating Progress in Obesity Prevention, strategies presented at the Centers for Disease Control and Prevention's Weight of the Nation conference, the Robert Wood

In 2002, around 40 diverse organizations called for a **coordinated**, **comprehensive**, and **communitybased** approach to combat the childhood obesity epidemic. Johnson Foundation's portfolio of obesity-focused national programs) and developed a set of broad goals, supporting objectives, and actionable strategies and tactics to accomplish these goals.

- Next, a broad cross-section of consortium members met in small groups at CLOCC's September 2012 Quarterly Meeting to share and discuss the best practices and lessons learned through years of work in the field.
- Finally, philanthropic funders and Chicago-based corporations participated in roundtable events to explore the opportunities for each sector to contribute to obesity prevention initiatives.

This blueprint is the culmination of this series of meetings and discussions. The recommendations presented in the following pages represent the combined ideas, opinions, and guidance of key leaders of the national childhood obesity prevention movement. They are drawn from the best available research and evidence about promising strategies, set in the local Chicago context with attention to current advancements and momentum in the city. We hope that individuals and organizations in Chicago will find the blueprint to be a useful guide for investment, programmatic actions, and policy initiatives to accelerate the city's progress in childhood obesity prevention. It is our intention that this report adds to the growing body of evidence-based strategies being shared by the city's diverse agents of change (e.g., the Chicago Department of Public Health's Healthy Chicago, the Chicago Department of Transportation and Chicago Park District's Make Way for Play, the Metropolitan Planning Council's Chicago 2020, LISC New Communities Program's Quality of Life Plans) and help to focus our combined resources and energy to build on our first decade of progress.

Guiding Principles

Woven throughout all of the following sections are several guiding principles. First, childhood obesity prevention requires a social-ecological and multi-sectoral approach. Second, community-based strategies must be grounded in and guided by community realities, desires, and assets with active community engagement in their development. Third, decision making must be based on evidence. Lastly, special attention must be paid not only to disparities in obesity rates and the consequences of obesity across communities, but also to the inequities that result in higher concentrations of obesity and its consequences in low-income communities and communities of color.

Social Ecology

The field of obesity prevention has increasingly acknowledged that the complexity of the problem requires a multi-sectoral approach that involves all aspects of society and addresses risk and protective factors across all levels of social organization (e.g., individuals, families, institutions, communities, and society at large). CLOCC adopted this "social-ecological approach" to obesity prevention from the beginning and continues to foster this approach today. CLOCC partners understand that individuals and families who are educated and motivated to live healthy, active lives can only succeed if they have access to environmental supports for a healthy lifestyle. For example:

• The streets and sidewalks must be safe enough for people to walk and bike for recreation and transportation.

The recommendations in this blueprint were drawn from research and evidence about

promising strategies set in a

local context.

- Fresh produce and other healthy foods and beverages must be accessible, affordable, and close to where people want to shop.
- Schools, childcare providers, and after-school programs must provide nutritious meals and incorporate active play throughout the day.
- Hospitals and workplaces must support and encourage breastfeeding and other obesity-preventive behaviors among parents and caregivers.
- Industry must make, sell, and market products to children that support, rather than threaten, their health and well-being.
- Public policy and government action must support or even require these community and institutional conditions.

To effectively and significantly prevent and reduce childhood obesity in Chicago, the complex network of settings and systems that affect the options and opportunities available to families must support health. Therefore, all levels (individual, family, institution, community, and society) and all sectors of our community (including government, school, healthcare, academia, youth development, and industry) must contribute to the solution.

The social-ecological approach is reflected throughout this blueprint with goals, objectives, strategies, and tactics that focus on individuals, families, institutions, and communities along with the inclusion of CLOCC's policy priorities for childhood obesity prevention.

Policy and Advocacy

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Many of the recommendations put forth in this blueprint can (or must) be supported by policy changes at the city, state, or federal levels. The socialecological approach described here includes policy change by definition. In 2011, CLOCC released a set of childhood obesity prevention policy priorities. The list of priorities was developed in a year-long participatory process during which more than 60 CLOCC partners contributed their ideas and expertise. Building on a number of national reports, CLOCC staff and partners focused on policy approaches that were likely to improve healthy eating and physical activity for children across Chicago. These policy priorities include developing a state system for childhood BMI surveillance, supporting novel models for healthy food retail, expanding the number of hospitals with the "Baby Friendly" designation to support breastfeeding, implementing complete streets policies in the city, introducing daily physical education in Illinois schools, and advocating for higher reimbursement for clinical care related to obesity prevention and management. Due to the continued relevance of this set of policy priorities, we do not include a specific section on policy in this blueprint. Readers are encouraged to refer to CLOCC's policy priorities at www. clocc.net/coc/policy/index.html. CLOCC staff and partners have been actively advancing these priorities since 2011 when they were released.

In addition, several city government efforts are underway that will support healthier eating and increased physical activity for Chicagoans. Many of these efforts are being led by city agencies that collaborate through the City of Chicago's Inter-Departmental Task Force on Childhood Obesity (IDTF). Established in 2006 under the leadership of the Chicago Department of Public Health and facilitated by CLOCC staff, the IDTF founding members also include Chicago Public Schools (CPS), Chicago Department of Family and Support Services (DFSS), and the Chicago Park District. Over time, the IDTF has expanded to Childhood obesity prevention requires a **SOCIAI**ecological and **multi-sectoral** approach.

include the Chicago Departments of Transportation (CDOT), Housing and Economic Development (DHED), and Police Department, as well as the Chicago Housing and Transit Authorities, the Chicago Public Library, and the Mayor's Office for People with Disabilities. Some of the obesity prevention-related efforts being undertaken by these agencies include CDOT's Streets for Cycling and Pedestrian Plans, A Recipe for Healthy Places (a food plan being advanced by DHED, CDPH, DFSS, and CLOCC), and CPS's new policies for school wellness and competitive foods. In addition, CDPH's public health agenda, *Healthy Chicago*, includes obesity prevention as one of 12 public health priorities and makes recommendations for policies, programs, and education that will help to slow the obesity epidemic in Chicago. Many of these city efforts are described in more detail in the relevant sections of this blueprint. We mention them here because they illustrate the important work being done by city agencies in the policy arena, not only as individual entities but in collaboration. We strongly encourage the City of Chicago to continue to support the IDTF and its efforts, and we encourage IDTF members to refer to the recommendations in this blueprint in developing future initiatives.

Community Engagement

The concept of community is important in Chicago. There are 77 officially designated communities within the city of Chicago and locally-recognized sub-communities within each of these. Chicagoans feel a great sense of identification with these neighborhoods or "communities of geography."

Chicago is also a diverse city with representation from many racial and ethnic groups, faith communities, and communities based on gender, sexual orientation, disability status, country of origin, and more. These "communities of identity" help make Chicago a vibrant city, rich in culture and history.

An underlying premise of this blueprint is that members of these communities of geography and identity must be involved in the development, implementation, and evaluation of the interventions designed to address childhood obesity. People and organizations that represent these diverse communities are the best sources of information about opportunities as well as their strengths and challenges. They can also provide valuable insight about effective methods for involving other members of their communities. Many of the ideas presented in the following pages were born out of community-driven approaches to improving nutrition and physical activity for Chicago's children, and people across the city are actively engaged in diverse strategies to prevent obesity.

In addition to communities of geography and identity, there are communities of practice such as educators, advocates, clinicians, government officials, and others who have a professional interest in preventing childhood obesity. These communities must be engaged too, as they can provide expertise and best practices from their specific focus areas to strengthen the reach and effectiveness of obesity prevention interventions. Also, these communities of practice often have access to resources – such as financial resources or institutional authority – that might otherwise be unavailable to communities of geography and identity yet are critical for accelerating progress.

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Finally, it is essential to involve the children of Chicago, their families, and others who take care of them. Without their support, commitment, buy-in, and active involvement, the strategies identified in this blueprint will not succeed.

Successful community engagement will include:

- Activating and inspiring communities to get and stay involved in the work of creating healthy environments in their neighborhoods.
- Providing information and resources to all communities that will help them create change at all levels of social ecology.
- Helping to develop effective strategies for obesity prevention within specific communities, tailoring interventions to each community's particular assets and challenges.
- Ensuring that the city as a whole learns from and incorporates individual community experiences and expertise.

Community Coalitions

The application of a social ecological approach to obesity prevention, by definition, requires a coalition for effective implementation. No one organization is likely to have expertise in health education, environmental change, institutional decision-making, and policy change at the local, state, and federal levels. Community coalitions comprised of representatives of diverse communities of geography, identity, and practice can facilitate knowledge and ideas exchange, and increase community awareness about a health concern and support for interventions to address it. They can help mobilize diverse populations, talents, and resources; leverage resources without duplicating efforts; and develop synergy for effective change.⁽⁹⁾

The Consortium to Lower Obesity in Chicago Children is an example of a community coalition focused on obesity prevention, developed because of the need for the benefits listed above in order to confront the childhood obesity epidemic in Chicago. We encourage the development and support of neighborhood coalitions for the same reasons, to ensure that these benefits of coalitions are experienced in Chicago neighborhoods, especially those that experience disparities. One example of a neighborhood coalition developed to confront obesity is Community Organizing for Obesity Prevention (CO-OP). First implemented in Humboldt Park (CO-OP HP), this coalition model brings together diverse organizations to develop programs and strategies to support individuals, change institutions, and improve the neighborhood's access to healthy food and safe opportunities for physical activity.⁽¹⁰⁾ (11) While investments in individual organizations and institutions working to prevent childhood obesity are critical, investments in coalitions, including investment in the core processes and functions of these coalitions (e.g., meetings and strategic planning, communications and network building) and not just in the interventions they develop, will be an important part of accelerating progress in childhood obesity prevention in Chicago.



Community coalitions can increase awareness about a health concern and create support for interventions to address it.

Engaging the Clinical Sector

Physicians and other healthcare providers play a critical role in the management and prevention of obesity. The nation's health leaders, including the American Academy of Pediatrics (AAP) and the U.S. Preventive Services Task Force (USPSTF), recommend that the clinical sector assess and diagnose children's BMI, disseminate evidence-based messages for all children, and provide specialized types of counseling for overweight and obese children and their families with referrals to community services and programs that encourage healthy eating and physical activity.^{(12) (13)} Providers are encouraged to refer overweight and obese children to "comprehensive moderate- to high-intensity" programs that include dietary, physical activity, and behavioral counseling components."⁽¹⁴⁾ In addition to prevention and management activities, physicians and other providers sometimes treat severely obese children with medical or surgical interventions. However, the AAP recommends these most aggressive approaches be combined with the approaches described above and only be used for children with BMI at the 99th percentile or above.(14)

CLOCC leaders and colleagues at Lurie Children's Hospital in the Pediatric Practice Research Group (PPRG) have learned through a variety of mechanisms that pediatricians and other healthcare providers in Chicago face challenges in following prevention and management recommendations, especially pertaining to referrals to communitybased programs. Providers describe having a lack of information about community-based programs for nutrition and physical activity. CLOCC and PPRG partnered with the Illinois Chapter of the AAP (ICAAP) to develop and test strategies to connect physicians' practices to the kinds of programs and organizations recommended for referral. Additional efforts are needed to overcome patient and family barriers to program attendance. The availability of comprehensive, moderate- to high-intensity programs, as recommended by the USPSTF, also must be addressed. In 2012, the Illinois African American Coalition for Prevention and others (including CLOCC), partnered with the U.K. based Mind, Exercise, Nutrition... Do It! (MEND) to open up a small number of evidence-based programs at various community sites (e.g., school-based health centers, Chicago Park District field houses) to begin to address the scarcity of local programs that would meet the USPSTF criteria.



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CLOCC does not present recommendations for the clinical management or treatment of obesity in this blueprint since its focus is on prevention. However, clinicians can play a critical role in addressing the goals and implementing the strategies in the following pages. We recommend ongoing engagement of and by the clinical sector and investment in efforts to support healthcare providers and other health professionals interested in obesity prevention and management. Because of the important role they play in counseling patients, we see clinicians and other health professionals as especially integral to the strategies presented in the **Health Promotion and Public Education** section. Clinically oriented partners will find resources for their work with individual families through the AAP (www2.aap.org/obesity) and the National Initiative for Children's Healthcare Quality (NICHQ – www.nichq.org/areas_of_focus/childhood_ obesity_topic.html).

Evidence-Based Decision-Making

When resources are scarce and need is high, decision-makers need to focus on things that are most likely to achieve the desired outcomes. Whether those decision-makers are children, parents, institutional leaders, or elected officials, they need to know that they are putting their time, energy, or money into things that will work.

In an ideal world, we would have substantial research evidence to guide us toward those interventions that are effective in obesity prevention. In the real world, however, research is limited to some extent in the kind of evidence it can produce. We know more, for example, about how health education increases knowledge about healthy eating but less about how that knowledge translates into behavior change. We know even less about how changes in food access lead to changes in behavior. Swinburn and colleagues note, "Although considerable work has been done to assess the burden of obesity, its major determinants, and potential interventions, debate continues on the most appropriate set of specific actions that should be undertaken and the expected outcomes of those interventions."⁽¹⁵⁾ They state that the typical criteria for evidence-based medicine (in which clinicians choose procedures based on scientific evidence that they are effective) are too narrow for the kinds of decision making needed in obesity prevention. In medical research, we can manipulate a single factor (like the amount or type of medicine prescribed) and measure specific outcomes (like changes in blood pressure or blood sugar levels). In obesity prevention, however, we cannot easily manipulate the amount of physical activity or number of calories a person gets throughout their day or week, and it is even harder to manipulate the environmental exposures (say, to certain kinds of foods or spaces for physical activity) people experience because they transition through multiple settings all day long (e.g., home, neighborhood, work, and leisure environments) and in many cases through different settings depending on the day.

As such, evidence-based decision making for obesity prevention (especially the kind of multi-sector, multi-level approaches recommended in this blueprint) needs a different framework for thinking about "evidence." Swinburn and colleagues propose a framework for obesity prevention decision-making that includes experimental and observational studies, effectiveness and economic analyses, program logic and theory, evaluation of existing strategies, and informed opinion (comprised of perspectives on feasibility, sustainability, unintended consequences, effects on equity, and acceptability to those involved). We drew on this "obesity prevention evidence framework" in our decision making about the goals, objectives, strategies, and tactics to include in this blueprint.

To develop the recommendations in each section, we reviewed available research and examined the local progress and current momentum in each focus area (which speaks to sustainability, local feasibility, and acceptability). We considered equity and unintended consequences (see **Health Equity** below) in making our final selections. While we may have included strategies and tactics here for which there is not a substantial body of supportive scientific research evidence and excluded some for which there is, the recommendations are evidence-based according to this broader framework for obesity prevention decision making.

Evidence-based decision making for obesity prevention needs **a different** framework for thinking about evidence.

Health Equity

Chicago not only experiences high childhood obesity prevalence overall, but also experiences disparities in health and obesity. Studies have shown that communities of color and lower-income communities have higher rates of childhood obesity than communities that are predominantly Caucasian or that have higher income levels. Not coincidentally, communities with higher rates of obesity also experience inequities in the ability of the surrounding environment to promote healthy, active lifestyles. For example, researchers have identified disparities in access to healthy food and beverages across Chicago neighborhoods. Also, transportation experts have discovered disparities in pedestrian safety, with some communities experiencing more pedestrian-vehicle crashes than others. There are also disparities in the availability and accessibility of parks and open space. Attention to these underlying health inequities can help to address Chicago's obesity disparities.

There are critical strategies to include when addressing health equity:

- Design and implement interventions with a focus on communities experiencing disparities.
- Actively engage representatives of communities experiencing disparities in all aspects of childhood obesity prevention strategies.
- Ensure that interventions are appropriate to the communities they are intended to support (e.g., using culturally relevant language, images, decision making, and communication processes).
- Strengthen capacity of communities to enhance the likelihood of successful change.
- Use policy, systems, and environmental change strategies that are sustainable and likely to reach large numbers of individuals and families while ensuring that these approaches do not widen health and obesity disparities.

This last point is worth elaborating. As the field of childhood obesity prevention places greater emphasis on strategies that improve the food and physical activity environments for children, we are likely to use strategies that are designed to reach entire communities. A policy that is meant to improve conditions across Chicago could, however, have the unintended consequence of widening disparities if some communities experience greater benefit than others. Differential benefit may occur because some communities have greater access to resources, information, or influence. While policy, systems, and environmental changes are essential for obesity prevention and many of the strategies identified in this blueprint are examples of these, we must be vigilant to ensure that their benefits accrue to all communities across Chicago, especially those experiencing health disparities.

Organization of the Blueprint

The strategies and steps CLOCC recommends for the next decade are grouped into six focus areas in which change is likely to have a positive impact on childhood obesity: food and beverage access, physical activity and the built environment, schools, early childhood, the business sector and industry practices, and health promotion and public education. Each of these focus areas is addressed in its own chapter, and categories are cross-referenced where interventions involve more than one area. Each chapter is divided into several sections. First, we summarize the available evidence that supports one or more clear directions for the focus area. We then describe the local context, with emphasis on opportunities and momentum for efforts in that area. While the local lists are not exhaustive, they are representative of the vast amount of work being conducted by CLOCC staff and partners across the city. Finally, we present broad goals, supporting objectives, important strategies, and (where possible) specific tactics, grounded in national evidence and local experience, that set the course for intervention in the focus area. Together, these chapters make up a blueprint for accelerating childhood obesity prevention in Chicago over the next decade. CLOCC will use it to guide our work, and we hope others in Chicago and beyond will find it helpful as they design and implement their own activities so together we can accelerate progress in childhood obesity prevention and further reduce the burden of obesity on children over the next decade.

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