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

Consortium to Lower Obesity in Chicago Children

clocc

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

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).

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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

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.

In 2002, around 40 diverse organizations called for a coordinated, comprehensive, and community-based approach to combat the childhood obesity epidemic.

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

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

The recommendations in this blueprint were drawn from research and evidence about promising strategies set in a local context.

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.

- 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

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 social-ecological 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.

Childhood obesity prevention requires a social-ecological and multi-sectoral approach.

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

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

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77

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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.

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]

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

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.

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 community-based 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.

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.

Evidence-based decision making for obesity prevention needs

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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.

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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Food and Beverage Access

CONSORTIUM TO LOWER OBESITY IN CHICAGO CHILDREN

Food and Beverage Access

Neighbor Carts sell fresh produce in underserved areas of the city.

Nationwide

Over 23.5 million Americans do not have access to a grocery store within one mile of their home.[1] This represents 8.4% of the U.S. population and 33% of the population living in low-income communities. Residents of these communities have limited access to fresh fruits, vegetables, and other healthful foods, while calorie-dense and nutrient-poor foods and beverages sold at fast food restaurants and corner stores are plentiful. A study in Philadelphia found that children consumed an average of 357 excess calories a day on the way to and from school.[2] Nearly 40% of children's diets today come from added sugars and unhealthy fats.[3]

Advocates for healthy food access have employed community-level interventions as well as incentive programs for retailers to ensure produce and other healthful foods are available in all neighborhoods. Pennsylvania's Fresh Food Financing Initiative utilizes a public-private partnership to provide grants and loans to incentivize supermarket development in underserved communities. The initiative's success – 88 fresh food retail projects in 34 counties that created or preserved more than 5,023 jobs and improved access to healthy food for over half a million people – has inspired other states and cities to follow suit.[4] California, New York, and New Orleans have launched similar programs, with many other states on track to join them. In 2012, the State of Illinois announced the Illinois Fresh Food Fund, modeled after these programs.

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Programs are also underway to incentivize healthier offerings at the corner stores and small storefront groceries that are often the most accessible retail outlets in lower-income communities. These corner store "conversions" not only increase the amount and variety of healthful offerings – including fruits, vegetables, whole grain products, and low- or no-fat dairy – but often include other strategies such as point-of-purchase displays (encouraging shoppers to pick the healthier options at the point of sale), cooking demonstrations, or taste tests. An analysis of sixteen healthy corner store interventions in low-income neighborhoods found consistent improvements in the availability, purchase, and customer intake of the healthier products. Programs that employed multiple strategies were found to be the most successful interventions.[5]

Community-level interventions – such as farmers' markets, community gardens, and mobile produce carts – are often less expensive, require less space, and are quicker to implement than programs that encourage new store development, yet are also effective at promoting fresh food access and consumption. Studies have found that the introduction of farmers' markets or smaller farm stands are associated with increased community fruit and vegetable intake[6] and that community gardens can improve food access and food security.[7] [8]

The policies and practices guiding the emergency food system offer valuable opportunities to promote healthy food access, not just for the program participants but also for other community members. For example, when the federal Women, Infants, and Children (WIC) program increased the funds available to participants for the purchase of fruits and vegetables, community-level access to produce in convenience and grocery stores in low-income neighborhoods increased.[9]

The USDA's *2010 Dietary Guidelines for Americans* lists both foods and nutrients to increase and foods and food components to reduce.[10] The Institute of Medicine recommends that "governments and decision makers in the business community [and] private sector should make a concerted effort to reduce unhealthy food and beverage options and substantially increase healthier food and beverage options at affordable, competitive prices."[11] Both sets of recommendations are based on a large body of research that supports the need for individuals to balance high-quality and low-quality calories in their diets and the need for a similar balance in the quality of calories available to us in our environments. Creative approaches to consumer education are a vital tool to support individuals as they strive for calorie balance. One recent study found that posting signage prominently in corner store beverage cases with the caloric content of a soda or juice led to a one-third reduction in the purchase of sugar-sweetened beverages. Even more effective was signage noting that the beverages comprised 10% of daily caloric intake or required 50 minutes of running to "work off." These alternative approaches reduced sugar-sweetened beverage purchases by up to 50%.[12] Even as healthy foods become more accessible, public health and community advocates must also develop, evaluate, and disseminate innovative strategies to reduce the availability of less healthy foods and beverages and encourage substitution of healthier options for high-calorie, less nutritious foods and beverages.

Chicago

Collaborative efforts by community groups, public health advocates, and city government agencies helped reduce the number of Chicagoans living in communities with limited access to healthy food by almost 40% between 2005 and 2010.[13] Despite this progress, an estimated 380,000 Chicagoans still live in so-called "food deserts," and well over 100,000 of these residents are children.[13]

380,000
Chicagoans live in "food deserts."
100,000+
are children.

Citywide, over 70% of students do not eat the recommended number of fruit and vegetable servings per day, and almost a third of high school students drink one or more sugar-sweetened beverages a day.[14] [15]

Current Strategies/Progress to Date

Local advocates have employed many strategies to increase the availability and affordability of fruits, vegetables, low-fat dairy, whole grains, and other healthful foods and beverages, especially in underserved neighborhoods. Chicago's City Council approved new ordinances removing barriers to urban agriculture and permitting mobile produce carts. In an effort to address health equity, produce vendors that operate mobile carts under the new program must conduct at least 50% of their business in communities that are underserved by healthy food retail.

The city has also engaged in a year-long process to craft a comprehensive plan to address obesity through building a healthier food culture in Chicago. Led by several city agencies and CLOCC, the process integrated the contributions of over 400 representatives of diverse public, private, and non-profit organizations and will result in the creation of a Chicago food plan, *A Recipe for Healthy Places.* The plan aims to contribute to the prevention of obesity and related diseases through changes to residents' day-to-day environment to support healthy eating. It also includes recommendations for a public education campaign to promote healthy lifestyles and discourage the consumption of unhealthy foods. Readers with a particular interest in government-coordinated food access interventions are referred to *A Recipe for Healthy Places* for additional information and guidance.

Chicago community groups and corner store owners are forging collaborations to increase the stock of fresh, high-quality produce in local stores. CLOCC, the West Humboldt Park Development Council, and the Inner-City Muslim Action Network (IMAN) have partnered with corner stores in the West Humboldt Park, Austin, Englewood, and West Englewood neighborhoods to improve not only the availability but also the quality of fruits and vegetables. The strategy includes positioning the more healthful offerings prominently within the store and informational displays and in-store events to improve customer awareness and increase demand.

Farmers' markets, whether city-sponsored or community-driven, are available throughout the city with an increasing presence in underserved neighborhoods. Many Chicago farmers' markets now accept LINK cards available through the Supplemental Nutrition Assistance Program (SNAP) to further address inequities in the affordability of fresh fruits and vegetables. In 2012, Mayor Rahm Emanuel's administration announced their plan to establish five new farmers' markets across the city.

According to GreenNet Chicago, there are over 600 community gardens in Chicago. The numbers of these that are food-producing or "edible gardens" is unknown. A number of organizations have come together, with support from CLOCC and others, to develop an inventory of edible gardens. Many neighborhoods across the city have established networks of edible gardens and some are using innovative approaches to link the food produced to local retail so that residents not involved in the gardens have access to the food they produce. Backyard share programs, which connect homeowners that have available garden space with eager but land-less apartment or condo dwellers, are an emerging approach to increasing urban agriculture in underserved neighborhoods.

Recommendations for the Next Decade

Goal 1: Make healthy foods and beverages easily accessible to all children where they live, learn, and play.

Objective 1-1: Increase local healthy food production.

- **Strategy a:** Expand urban farming and agriculture.
- **Strategy b:** Expand community gardening.

Objective 1-2: Increase the sale of healthy food and beverages.

- **Strategy a:** Expand availability of healthy food and beverages in existing retail establishments (e.g., corner stores, restaurants, cultural institutions, sport and entertainment venues).
- **Strategy b:** Encourage new healthy food and beverage retail.
  - **Tactic:** Promote the City of Chicago's produce merchant license.
  - **Tactic:** Promote the availability of food financing options (e.g., Illinois Fresh Food Fund).

Objective 1-3: Increase the availability of healthy food and beverages in the emergency food system.

- **Strategy a:** Ensure that food and beverages made available through government-funded food assistance programs meet the *Dietary Guidelines for Americans* (www.cnpp.usda.gov/dietaryguidelines.htm).
- **Strategy b:** Work with food pantries and emergency meal programs to stock and deliver healthy foods and beverages.
- **Strategy c:** Create, expand, and promote linkages between supplemental food programs (e.g., SNAP) and local food and beverage retail to ensure that Chicagoans who receive public food assistance can take advantage of farmers' markets, produce carts, and other healthy food and beverage retail.

Goal 2: Create a culture of demand for healthy foods and beverages through widely visible public health campaigns.

(See **Health Promotion and Public Education** section)

Objective 2-1: Disseminate evidence-based health messages to educate children and families about the importance of a healthy diet through popular media, outdoor advertising space, and in public buildings.

- **Strategy a:** Disseminate CLOCC's *5-4-3-2-1 Go!*® message and complementary messages that promote consumption of healthy food and beverages.
- **Strategy b:** Post consistent nutrition messages in food pantries and other emergency food distribution locations to educate program participants.
- **Strategy c:** Inform community residents of the availability of farmers' markets, community gardens, and mobile food vending.

Objective 2-2 : Restrict advertising/marketing of high-calorie, low-nutrition foods and sugar-sweetened beverages, especially to children. (See **Business Sector and Industry Practices** section)

- **Strategy a:** Educate Chicago decision makers (e.g., elected officials, institutional leaders, parents) about the diverse approaches to advertising used by food and beverage marketers (e.g., logo placement, online games, toys, and cartoon character use).
- **Strategy b:** Support national and local strategies to limit food marketing to children.

The Glenwood Sunday Market in Rogers Park.

Goal 3: Reduce the availability of and access to calorie-dense and nutrient-poor food and beverages in Chicago communities and institutions.

Objective 3-1: Work with food retail establishments to decrease the amount of calorie-dense and nutrient-poor food and beverages available for purchase.

Objective 3-2: Use a combination of incentives and disincentives to restrict unhealthy foods and beverages sold in public venues.

- **Strategy a:** Eliminate all high-calorie, low nutrition snacks and sugar-sweetened beverages from vending machines.
- **Strategy b:** Provide financial incentives to businesses that sell a greater amount of healthy foods and beverages than unhealthy foods and beverages.

Objective 3-3: Achieve greater balance in pricing of healthy vs. unhealthy food and beverages.

- **Strategy a:** Implement dollar-matching programs (e.g., "double value coupons") for consumers that participate in federal nutrition assistance programs including SNAP and WIC to increase affordability of healthy foods.
- **Strategy b:** Adjust pricing in vending machines, restaurants, and food retail establishments to make healthy foods and beverages cheaper and unhealthy foods and beverages more expensive.

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Physical Activity and the Built Environment

2

Physical Activity and the Built Environment

Nationwide

The U.S. Department of Health and Human Services recommends that young people aged 6–17 years participate in at least 60 minutes of physical activity daily.[1] Yet, in 2011, only 29% of high school students surveyed in the Youth Risk Behavior Surveillance System (YRBSS) had participated in at least 60 minutes per day of physical activity on the seven days prior to the survey.[2] In that same year's survey, 60% of females and 40% of males reported getting 60 minutes of physical activity on less than five days in the prior week, with 18% and 10% not getting the recommended amount on any of the seven previous days. Black, Hispanic, and Asian youth were less likely to be physically active than Caucasian youth.[3] In a national study using objective measures of physical activity (as opposed to asking people to self-report), 42% of children 6-11 years old met the 60 minutes per day guideline, while only 8% of adolescents achieved the goal. Males and younger children were more active than females and older children, adolescents, or adults.[4]

Only

29%

of high school students surveyed had participated in at least 60 minutes per day of physical activity.

The causes of physical inactivity are numerous and complex. Studies have identified a number of features of the physical environment (the combination of features that occur naturally and those that are built) that influence physical activity. In one review of the literature, relationships were found between physical activity and land use mixture (whether or not multiple kinds of destinations exist within one community), traffic density and safety, and access to green space and recreational facilities.[5]

The percentage of children who walked or biked to school decreased between 1970 and 2000.

In a review of thirty-three quantitative studies that examined the relationships between the physical environment and physical activity among children ages 3-18, children were found to be more active if they had access to parks and recreation facilities, supportive sidewalks, controlled intersections, a variety of destinations of interest, and public transportation. Conversely, the number of streets to cross to get to important destinations, traffic density, crime, and lack of available space for recreation were associated with lower levels of physical activity.[6]

Active Living Research, in a series of research reviews and briefs, has pointed to such diverse factors as access to recreational environments (e.g., parks, trails), physical activity programs (e.g., in childcare, school, and after school), open and accessible schoolyards, and characteristics that make communities "walkable" (having nearby destinations to walk and safe direct routes to get to them) as having a positive influence on children's physical activity levels.[7] [8] Most studies of children and adolescents suggest that active transportation to school (walking or biking) is associated with higher levels of overall physical activity. Yet the percentage of children who walked or biked to school decreased between 1970 and 2000[9] – the three decades over which the childhood obesity epidemic has soared to today's levels. While the presence of physical activity facilities and infrastructure influences activity, such facilities and infrastructure lead to more physical activity when they are perceived to be of high quality and safe.[10]

Though research has clarified many of the factors associated with increased physical activity, the lack of equitable distribution of the resources associated with increased physical activity may help to explain the racial and ethnic disparities in obesity observed in the U.S. Multiple studies and research reviews suggest that environmental features such as parks and green space,[11] attractive scenery,[12] and recreational facilities (e.g., schools, recreation centers, public swimming pools)[13] are less frequently found in U.S. communities with predominantly lower-income or racial and ethnic minority residents.

In addition to the availability of environmental features that support physical activity, programs specifically designed to engage children in physical activity are also essential, but do not inherently lead to increased physical activity. In the Active Living Research brief, *Policies and Standards for Promoting Physical Activity in After-School Programs,* the summarized studies point to two key results. While after-school programs may be plentiful and intended to engage children in physical activity, children participating in them frequently get less than the recommended daily amount of activity, and often a large percentage of those enrolled are inactive (or "sedentary") during the program.[14] The largest study of physical activity within after-school programs found that only 17% of children came close to half of the daily recommended number of steps for children while participating.[15]

The evidence cited above speaks to the importance of designing and improving neighborhoods and communities so that they support and enable activity by providing a safe and secure environment equipped with the necessary infrastructure. An inhospitable and unsupportive environment can discourage even the most motivated individual from pursuing a physically active lifestyle. To enable activity, sidewalks must be available and well maintained, street crossings properly marked and controlled, and parks outfitted with safe play equipment and free of illegal activity. Families must also feel confident that children can walk to school or play outside without fear of crime and violence.

Chicago

According to 2007 YRBSS data reported by the Child Health Data Lab at Lurie Children's Hospital, only 29% of high school students in Chicago engaged in moderate physical activity on five days or more during the week before they were surveyed (compared to 46% in the rest of Illinois). Students in Chicago were also less likely to attend physical education class one or more times a week and more likely to watch three or more hours of television on an average day.[16]

Research suggests that Chicago communities are not as supportive of walking and biking as they could be. While Chicago is home to over 7,600 acres of publicly available parks, playgrounds, and beaches, Chicago experiences disparities in park access. In an October 9, 2011 *Chicago Tribune* article, an analysis of data from the Chicago Department of Housing and Economic Development, the Metro Chicago Information Center, and the U.S. Census Bureau indicated that 32 of Chicago's 77 community areas failed to meet the city's own standard for open space – two acres for every 1,000 people. Twenty of those 32 had a 2009 median household income that fell below the city's median of $46,781. While low open-space access areas exist in all regions of the city, only three border the lakefront (Rogers Park, Edgewater, and Near North Side). Further, according to the article, neighborhoods with the greatest open-space deficit (more than 40 acres below the 2/1,000 people standard) are concentrated on the north and northwest sides; and many of these have large Hispanic populations.[17] In a recent study of park use in Tampa, FL and Chicago, only 50% of children observed in parks were engaged in physical activity. In Chicago, children in parks in predominantly African American neighborhoods, and park users in higher-income neighborhoods were more active than in low-income neighborhoods.[18]

Safety and injury are significant problems on city streets. Chicago had the third highest hospitalization rate for motor vehicle crashes among youth across eight Illinois public health regions, with 45.5 per 100,000 people from 2005-07. Within Chicago, the central, north, and northwest regions had the lowest hospitalization rates (23.2 – 34.4/100,000), while the west, southwest, south, and far south regions had the highest (40.5 – 55.5/100,000). Children ages 5-9 and 15-19 had the highest hospitalization rates. While hospitalizations among 15-19 year olds were most likely to result from injuries sustained as a passenger in a vehicle, hospitalizations among 5-9 year olds most frequently resulted from injuries sustained as pedestrians.[19]

Current Strategies/Progress to Date

A number of interventions are underway in Chicago to improve the physical environment and increase physical activity. Efforts to improve the city's bicycle infrastructure can be found at www.chicagobikes.org. The Chicago Department of Transportation (CDOT), with support from CLOCC, the Chicago Department of Public Health, and the Chicago Park District, developed a guide to improvements in access to the city's parks. CDOT also developed a set of guidelines for street engineering to make Chicago's streets more accommodating to pedestrians, cyclists, and public transit users. A number of community-based organizations have partnered with city agencies to create programs that encourage residents to use the city's streets and sidewalks for physical activity

on designated days of the week. Initiatives such as Open Streets, Play Streets, and B-Ball on the Block turn streets into temporary physical activity zones for residents in neighborhoods where park space is limited. Community groups across the city, from Englewood to Brighton Park to Rogers Park, have used CLOCC's Neighborhood Walkability Assessment Tool (NWAT) to identify and address barriers to walking and biking in their neighborhoods. The tool, which was developed by CLOCC and a consultant from the Active Transportation Alliance, guides users through an evaluation of four components of supportive physical activity environments:

- **Walkability**
  Are sidewalks, streets, and crossings safe and walkable?
- **Aesthetics**
  Is the surrounding environment attractive?
- **Recreation facilities and spaces**
  Are they available and accessible?
- **Safety**
  Does traffic, crime, or violence compromise user safety?

Neighborhood walkability assessments help to

identify and address barriers

to walking and biking.

Once the walkability of a block, intersection, or access route to an important destination has been evaluated, the NWAT suggests specific actions and strategies to effect obesity-preventive changes to the environment. Numerous neighborhood improvements to promote walkability have been implemented by residents and community groups as a result of their use of the tool. The "Walkable Bikeable Humboldt Park" team, comprised of 20 neighborhood block clubs, employed the NWAT to secure the following improvements: street lighting repaired, speed bumps installed and replaced, abandoned buildings boarded, and the conversion of an empty lot to a community garden. The Martha Gonzalez Memorial Committee in Pilsen utilized the NWAT to successfully advocate for additional signage, a longer pedestrian walk time, and a new traffic pattern at a dangerous intersection.

Additional strategies exist to promote physical activity and safety. Local park advisory councils have launched park programming that displaces crime and loitering and engages families and children in active play. Many communities operate walking school buses to guide children safely to and from school.

Recommendations for the Next Decade

Goal 1: Ensure that children participate in physical activity programming where they live, learn, and play.

Objective 1-1: Expand existing city-wide physical activity strategies.

- **Strategy a:** Implement or expand physical activity opportunities for children in childcare (see **Early Childhood** section) and school (see **Schools** section).
- **Strategy b:** Improve access (availability, affordability) to formal physical activity programs at community institutions (e.g., YMCAs, Chicago Park District facilities, gyms and fitness centers).
- **Strategy c:** Support and expand organized programs that make temporary use of the public way for organized physical activity (e.g., CDPH's Play Streets, Chicago's Open Streets, LISC's B-Ball on the Block).

Objective 1-2: Increase community awareness of availability and importance of physical activity opportunities.

- **Strategy a:** Educate children and adults who care for them about the importance of physical activity. (See **Health Promotion and Public Education** section)
- **Strategy b:** Promote the availability of community-based programs that deliver culturally- and community-appropriate physical activity and strengthen children's physical activity skills.

Goal 2: Create, expand, or improve community environments where children can be physically active.

Objective 2-1: Ensure that city streets and sidewalks support walking, biking, and other forms of physical activity for leisure and transportation.

- **Strategy a:** Gather and share data about barriers to walking and biking in neighborhoods with community organizations and government agencies.
  - **Tactic:** Train and support community-based organizations to implement CLOCC's Neighborhood Walkability Initiative.
  - **Tactic:** Support street/sidewalk environmental change approaches.
- **Strategy b:** Implement Chicago's Complete Streets policies and practices.
- **Strategy c:** Implement the components of the Chicago Department of Transportation and Chicago Park District's *Make Way for Play*.
- **Strategy d:** Adopt and/or implement city policies regarding land use, zoning, community development and more to incorporate infrastructure and other environmental improvements that accommodate physical activity.

Objective 2-2: Increase or improve the use of public space for physical activity.

- **Strategy a:** Make school grounds available for public use after school hours.
- **Strategy b:** Convert available space (e.g., empty lots) to physical activity spaces (e.g., walking paths, skate parks, playing fields, community gardens).

Objective 2-3: Ensure the safety of existing and/or new physical activity environments.

- **Strategy a:** Strengthen crime prevention in community spaces and during times when children are more likely to be outside and active.
- **Strategy b:** Increase traffic enforcement on major streets and intersections to calm traffic and reduce pedestrian-vehicle crashes.
- **Strategy c:** Ensure and monitor the safety of playground equipment in schools and parks.

Objective 2-4: Enhance the aesthetics of community environments.

- **Strategy a:** Incorporate artwork into public places and other parts of the community.
- **Strategy b:** Require landscaping in public places.
- **Strategy c:** Establish culturally acceptable standards for aesthetics of major street development.
- **Strategy d:** Promote property maintenance through neighborhood planning and neighborhood groups.

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3

Schools

Schools

Chicago Public Schools students eating lunch.

Nationwide

With up to half of children's waking hours spent in school, the policies and practices of schools have a powerful influence on the health and well-being of children and teens. However, the state laws and district policies that shape the daily food, beverage, and activity environments of youth are often inadequate for creating school settings that encourage good health and optimal learning.

Comprehensive School Wellness Policies

Comprehensive school wellness policies are an essential strategy for ensuring healthy school environments are implemented across states and school districts. In 2004 with the Child Nutrition and WIC Reauthorization Act, each school district was required to create a local school wellness policy by 2006. In 2010, with the adoption of the Healthy, Hunger-Free Kids Act, school districts were required to update their policies to more adequately address nutrition and physical activity as well as to describe processes for monitoring, evaluating, and updating these policies. Some of the key areas to address in wellness policies include nutrition standards for healthy school meals; restrictions on competitive foods (foods sold outside the school meal program); systematic nutrition education; physical activity opportunities before, during and after the school day; and systematic, quality physical education.

Almost

50%

of elementary-age students at American public schools have access to sugary, and high-fat foods.

Competitive Foods and Beverages

Less than half of all states have comprehensive nutrition standards that reduce sugar, fat, calories, and sodium in competitive foods. Competitive foods include foods sold in vending machines, as dining center à la carte items, in school stores, for school fundraisers, and by mobile food vendors. They also include foods made available through school celebrations, events, and student rewards. Many states that have nutrition standards for competitive foods address only some aspects of unhealthful consumption, often limiting fat and sugar but not overall calories. Competitive food policies are more prevalent at the elementary school level. At the middle or high school levels, policies are more likely to apply to just some, rather than all, sales venues. For example, high-calorie foods may be removed from vending machines but regularly sold within the school community for fundraising revenue.[1]

While about half of all states restrict the sale of sodas in à la carte lines at all grade levels, only one state prohibits all sugar-sweetened competitive beverages, including sports drinks, energy drinks, sweetened teas, and less-than-100% fruit juices.[1] Though these alternative beverages might seem like (or be marketed as) healthier choices, they can contain just as much – or more – sugar and calories than soda.

Because school nutrition standards limiting unhealthful competitive foods and beverages are often narrow in their application, if the standards exist at all, most American students are confronted with a barrage of high-calorie, high-sugar, high-fat consumables throughout the typical school day. Ninety percent of public high school students nationwide have access to sugar-sweetened beverages from competitive school-based venues, while three-quarters can purchase sugary or high-fat snacks at school. Approximately two-thirds of public middle school students can obtain sugar-sweetened beverages and unhealthful snacks at competitive school venues. And almost half of elementary-age students at American public schools have access to sugary and high-fat competitive snacks.[2] [3]

The impact of the wide availability of unhealthful snacks and beverages has been well-documented by research. School policies that allow items high in fat, sugar, and calories are associated with increased consumption of unhealthful snacks and beverages and reduced consumption of healthier options. Conversely, policies that restrict or prohibit unhealthy snack foods and beverages are associated with reduced purchase and consumption of these items. A limited, though growing, body of evidence suggests that health-promoting nutrition standards and the associated changes in consumption lead to measurable, positive changes in BMI. One caveat, though – in order for competitive food and beverage policies to be effective, they must be comprehensive. Policies that apply to some but not all venues (e.g., vending machines but not à la carte lines) or some but not all grade levels have a lessened impact on consumption. Similarly, standards that restrict soda but not the full universe of sugar-sweetened beverages are less effective at reducing school-based sugar consumption.[4]

School Meals

In the fall of 2012, the U.S. Department of Agriculture (USDA) released updated nutrition standards for the National School Lunch and Breakfast Programs. The new nutrition standards are intended to make school meals even healthier. Some of the criteria schools must adopt include incorporating at least 50% whole grains, serving more and a greater

variety of fruits and vegetables, switching to low-fat dairy products, and reducing calories and sodium. To implement the new guidelines, districts are working to ensure food service personnel have adequate training, equipment, and revised recipes.

In addition, research has shown that school districts that pilot supplemental activities to complement a strong school meal program, such as school garden or farm-to-school programs, have found an increased preference for and consumption of fruits and vegetables among students participating in these programs. Some school districts are using innovative techniques in the cafeteria, such as placing nutritious products at the end of the line for 'point-of-purchase' items, promoting healthy options through marketing and educational materials, and lowering the price of healthy options.[5]

Physical Education and Physical Activity

Although the majority of states and school districts nationwide require that physical education classes teach the benefits of a physically active lifestyle, far fewer states actually require that students engage in moderate to vigorous physical activity during their physical education (PE) classes. In fact, not one state requires that students spend 50% or more of PE time engaged in moderate to vigorous physical activity. And most policies at the district level are no more rigorous. Less than 15% of school districts nationwide set a minimum standard that all students engage in moderate to vigorous physical activity for at least half of their PE class time.[1]

Only

20%

of primary school students receive the recommended 150 minutes or more of physical education per week.

State and district level policies neglect other opportunities for physical activity during the school day as well. Less than 15% of states and districts nationwide require physical activity breaks, and less than 15% of states and less than 25% of school districts require daily recess for elementary schools students.[1]

Given the lack of policy-endorsed activity standards, only 20% of primary school students receive the recommended 150 minutes or more of physical education per week.[6] And while almost three-quarters of primary school students nationwide enjoy 20 minutes or more of recess every day,[7] students attending schools with high racial and ethnic minority or low socio-economic status populations are less likely than the general population to have the opportunity for daily recess.[8] Racial and ethnic minority students and students of lower socio-economic status are also less likely to participate in school-sponsored athletics.[1]

Research has shown that strong state laws and district policies that encourage physical education and activity are a valuable and powerful tool. Policies requiring moderate to vigorous physical activity are associated with a significant increase in the time students spend engaged in physical education. Likewise, when state laws encourage recess, schools are significantly more likely to have 20 minutes of recess daily. But while stronger laws and policies can be quite effective in increasing students' physical activity, they must be carefully crafted for maximum effect. Studies have shown that as PE participation increases, recess time tends to decrease and vice versa, suggesting that schools are substituting one form of physical activity for the other as policies allow.[8]

In a move to encourage stronger school policies to improve nutrition and increase physical activity, the USDA established the HealthierUS School Challenge. This is a major element of First Lady Michelle

Obama's *Let's Move!* initiative to address childhood obesity and support programming and policies that lead to the establishment of healthy school environments. The program recognizes and rewards schools for meeting high standards in food, nutrition education, physical activity, and physical education and has four levels of recognition: bronze, silver, gold, and gold with distinction.

Chicago

Chicago Public Schools (CPS), the only public school district for the entire city of Chicago, is the third-largest district in the nation. The CPS system includes 475 elementary schools, 106 high schools, 96 charter schools, and seven contract schools. CPS has a student enrollment of more than 404,000, 87% of whom are from low-income families. Students are primarily black (41.6%) and Hispanic (41.1%). White and Asian students represent 8.8% and 3.4% of students respectively.[8]

CPS has made great strides in the past few years to promote healthy school environments across the district. Some of these initiatives, including improved school meals and the creation of the Office of Student Health and Wellness, were developed through a process that engaged health policy experts, strategic partners, teachers, staff, parents, and students.

Building on this momentum, on October 24, 2012, the Office of Student Health and Wellness presented a revised CPS Local School Wellness Policy to the Chicago Board of Education that was officially adopted. This policy sets clear guidelines and establishes required practices to improve the school environment to support healthy behaviors. Some of the key provisions of the policy include:

- Schools must establish a wellness team, led by the Principal and designated Wellness Champion, which is responsible for oversight and implementation.
- School meals must meet CPS nutrition guidelines (equivalent to the HealthierUS School Challenge gold standard).
- School meal program must incorporate parent and student feedback.
- Nutrition education must be integrated into core subjects at every grade level.
- 2/3 of PE time will be spent in moderate to vigorous physical activity and all students are recommended to engage in at least 90 minutes of physical activity during the school day.
- Elementary schools must have 20 minutes of daily recess.

A complementary competitive food policy, the *Healthy Snacks and Beverages Policy,* was adopted by the Chicago Board of Education on November 14, 2012. This policy sets nutrition standards for foods and beverages served or sold on school grounds as "competitive foods." These include foods and beverages sold in vending machines, school stores, by food vendors on school grounds, and as à la carte items. The policy requires schools to prohibit the use of food as a reward and use alternatives such as physical activity. The policy also requires the

principal and Local School Council to establish a healthy fundraising and celebration plan outlining measures the school will take to promote the use of healthy foods. Adults in schools (teachers, administrators) are encouraged to model healthy eating and serve foods that meet nutritional standards.

Although significant progress has been made to date, there are still areas for improvement. For example, while Illinois is one of three states that require daily physical education for its students, the law permits school districts to waive out of the requirement, and many do – including Chicago. Forty percent of Chicago's high school students do not attend physical education classes in an average week, and just over 40% participate daily.[9] Some local elementary school students receive 40 minutes of physical education per week or less. With this reality in mind, CPS has committed to improving PE by engaging both stakeholders and PE teachers in setting goals to first improve the quality of existing PE minutes so that in all PE classes, at least 2/3 of time is spent in moderate to vigorous physical activity, and, in the next three years, to add more minutes of PE so that all students participate in an average of 90 minutes per week.

Current Strategies/Progress to Date

CLOCC's Healthy School Environment Assessment serves as a starting pointfor many schools seeking to integrate healthier options and behaviors into their environment. The assessment, which CLOCC adapted from the Centers for Disease Control and Prevention's School Health Index, guides school advocates (teachers, administrators, and parents) through a detailed assessment of a school's performance in five areas: physical activity and physical education, healthy eating and food access, nutrition education, water access, and family and community involvement. The assessment process helps to clarify a school's strengths and weaknesses in each of these areas and creates an opportunity for school stakeholders to discuss ideas and resources for addressing them.

Since the launch of *Go for the Gold* in 2010, over

100

schools have achieved national recognition for school wellness practices or are well on their way to doing so.

CLOCC staff and partners have facilitated the healthy school environment process at over 25 schools to date. Some schools have even achieved national recognition from the HealthierUS School Challenge for exceeding rigorous standards for food, fitness, and nutrition education. CPS and Healthy Schools Campaign are promoting school wellness through the *Go for the Gold* initiative which encourages and supports schools to apply for the USDA's HealthierUS School Challenge. Since the launch of *Go for the Gold* in 2010, over 100 schools have achieved national recognition for school wellness practices or are well on their way to doing so.

CLOCC created the Healthy Teacher Network to assist and empower teachers in their efforts to create healthier school environments. At semi-annual workshops, teachers learn the latest research linking healthy eating and physical activity with academic success and share best practice strategies, like yoga stretches for in-class activity breaks or nutrition activities, with their peers. Healthy Teacher Network events have been attended by representatives of over 90 Chicago schools from more than 39 Chicago zip codes.

Supervised play at recess at a Chicago Public School.

Recommendations for the Next Decade

Goal 1: Ensure all schools in Chicago support healthy eating and physical activity for students.

Objective 1-1: Advocate for and support implementation of comprehensive school wellness policies that include strong nutrition standards for school meals and competitive foods, ensure opportunities for physical activity and adequate minutes of quality physical education, and integrate nutrition education into core curricula.

- **Strategy a:** Assist schools with wellness policy implementation strategies to ensure policies are implemented at the neighborhood-school level.
- **Strategy b:** Create school wellness teams to support wellness policy implementation.

Objective 1-2: Build and increase capacity of various stakeholders including community-based organizations and food and fitness providers to support neighborhood-level schools in creating healthy environments.

- **Strategy a:** Provide technical assistance, training, funding and other support to organizations that implement strategies to improve school environments.
- **Strategy b:** Convene organizations that support schools and/or provide food and activity services and programming to build relationships and collaborations.

Objective 1-3: Identify strategies by which schools can serve as a hub for students, families, and the broader community to access healthy foods and opportunities for physical activity.

- **Strategy a:** Implement, as needed, joint-use agreements between schools and parks that foster community use of school playgrounds.
- **Strategy b:** Expand the use of school property for school and community gardens. (See **Food and Beverage Access** section)
- **Strategy c:** Offer programming at schools for parents and community residents that promotes healthy lifestyles. (See **Health Promotion and Public Education** section)
- **Strategy d:** Promote experiential learning opportunities for students and healthy food marketing to enrich the school food environment through programs such as salad bars, school gardens, farm-to-school, taste test opportunities, 'food-of-the month' strategies, and health-promoting murals, posters, and bulletin boards throughout the school.

Objective 1-4: Increase capacity of school staff to implement physical activity and nutrition education strategies, advocate for healthy school environments, and implement environmental change strategies.

- **Strategy a:** Provide professional development opportunities for teachers, administrators, and other school personnel on strategies to promote healthy and physical activity in schools. For teacher audiences, align with curricula grade level goals and common core standards.
- **Strategy b:** Provide financial support to schools to implement environmental changes (e.g., add student fitness centers, paint health-promoting murals in dining areas, install or improve school playgrounds).

Objective 1-5: Implement worksite wellness initiatives at schools to promote and support healthy behaviors for staff (lactation support, access to healthy food, physical activity opportunities) to increase their ability to serve as role models for students. (See **Business Sector and Industry Practices** section)

Goal 2: Improve the food and physical activity environment around schools.

Objective 2-1: Work with food retailers on or near school premises to increase access to healthy food options and decrease access to unhealthy food options.

- **Strategy a:** Implement food access initiative specifically around schools. (See **Food and Beverage Access** section)

Objective 2-2: Implement complete streets recommendations around schools. (See **Physical Activity and the Built Environment** section)

Objective 2-3: Create community coalitions with schools, the police department, and community-based organizations to create a safe environment for children to walk to and from school. (See **Physical Activity and the Built Environment** section)

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Early Childhood

4

Early Childhood

Nationwide

Over the last four decades, the prevalence of obesity among preschool children ages two to five has more than doubled, from 5% in the late 1970s to over 12% by the early 2000s. By 2009, 27% percent of preschoolers nationwide were overweight and 12% were obese.[1] A 2009 study of 4-year old children in the U.S. found 18.4% to have a BMI at or above the 95th percentile and 13.8% to be at or above the 97th percentile. This study's examination of racial and ethnic disparities in obesity among preschool children found that American Indian/Native Alaskan, Hispanic, and non-Hispanic black children were significantly more likely to be included in these categories of obesity than were their non-Hispanic white and Asian counterparts.[2]

These statistics suggest a lifetime of obesity for alarming proportions of the U.S. population as these children age. Weight gain and obesity in early life are known to be highly predictive of weight as children get older and eventually become adults, making early childhood approaches a critical component of childhood obesity prevention. Research has long indicated that childhood obesity often begins before the age of five years. For example, researchers from Harvard University demonstrated that weight gain in the first six months of life is a strong predictor of weight at three years of age and may have more of an influence on obesity than weight at birth.[3]

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The earliest years of a child's life also hold the greatest potential to establish a foundation of obesity prevention for life. A number of factors are believed to influence weight gain in early childhood. These include maternal factors such as pre-pregnancy weight gain in women,[4] [5] [6] weight gain during pregnancy,[7] gestational diabetes,[8] [9] and toxic exposures in-utero from chemicals in tobacco and the environment.[5] [10] [11] [12] Breastfeeding has been shown to significantly reduce an infant's likelihood of becoming overweight or obese as a child.[13] [14] [15] Obesity prevention efforts should not only start early in a child's life, including interventions with expectant families and families of infants and toddlers, but should also engage women during the time leading up to a pregnancy.

Childcare provider practices also offer a promising opportunity to positively influence the health and well-being of infants and toddlers, as over half of U.S. children spend up to twelve hours a day in childcare. Intervening in childcare settings has the potential to alter the food and physical activity environments of very young children,[16] ensuring that a significant number of children have access to healthy food and beverages and have safe opportunities for physical activity throughout the day. Because racial and ethnic disparities may reflect institutional practices that vary with the race or ethnicity of children served, city- and state-level policy changes offer the potential to reduce disparities via universal application of policies, as long as careful attention is paid to providers serving communities that experience disparities. (see **Introduction/Health Equity** section)

Collectively, this compelling body of evidence provides a clear and strong rationale for intervening to prevent childhood obesity *before* children begin elementary school, focusing on family, community, and institutional environments of 0-5 year olds and, based on maternal risk factors listed above, mothers and soon-to-be mothers of 0-5 year olds. Accordingly, the Institute of Medicine published a comprehensive report on early childhood obesity prevention policies in 2011.[17] This report, crafted by a team of the nation's leading experts, offers evidence-based recommendations for physical activity, nutrition, screen time, and sleep practices of children from birth through age five, as well as for food marketing to this age group. Their key recommendations are highlighted below.

Physical Activity

Young children, including infants and toddlers, require physical activity to maximize their physical, intellectual, and skill development as well as to maintain a healthy weight. Experts recommend that regulatory agencies require childcare providers to offer opportunities for physical activity throughout the day. Infants need "tummy time" for muscle development, and placement in high chairs should be reserved for feeding time so they may otherwise freely explore their environment. Toddlers and preschoolers should have access to indoor and outdoor play, while time in strollers should be limited so kids are walking, running, skipping, and playing as much as possible. Sedentary activities should be limited, with no more than 30 minutes of sitting or standing at one time. Withholding recess or other opportunities for physical activity as a punishment is discouraged.

Nutrition

A strong body of evidence documents breastfeeding's obesity-preventive effects, among many other health benefits; however, few women are able to meet the American Academy of Pediatrics recommendations of six months of exclusive breastfeeding along with continued breastfeeding

through baby's first birthday. Only 15% and 23%, respectively, of mothers nationwide currently meet these goals.[18] The authors of the report urge hospitals and employers in particular to implement policies and practices that facilitate breastfeeding and provide safe, comfortable, and convenient opportunities for mothers to pump or breastfeed.

To complement breastfeeding efforts, the report recommends that childcare center nutrition standards require a variety of healthy foods including whole grains; fruits and vegetables prepared with minimal added fat, sugar or salt; and low- or no-fat dairy. The U.S. Department of Agriculture is called upon to create science-based dietary recommendations for children under two years of age (no such recommendations exist at the time of writing) to provide clear guidance for parents, childcare providers, and other caregivers. Regardless of the setting – home or childcare – infants and toddlers should be encouraged to stop when full rather than urged to finish a bottle or "clean the plate."

Marketing and Screen Time

The evidence-backed recommendations of the report counsel no more than two hours a day of screen time for children ages two to five with no more than one hour per day in childcare settings. No screen time at all is recommended for children up to age two. With strong evidence suggesting children with a television or computer in their bedrooms are more likely to be obese, parents are urged not to permit these devices or other forms of digital media in children's rooms. Advocates for children's health are urged to use social media to educate and encourage children to adopt healthy lifestyles. CLOCC's *5-4-3-2-1 Go!*® message was cited by the report authors as an example of an effective and engaging tool for marketing health-promoting behaviors.

Sleep

As the obesity epidemic has developed over the past few decades, a parallel epidemic of sleep deprivation has occurred, with children averaging 30 to 60 minutes less sleep per night between the 1970s and the 1990s.[19] Emerging evidence strongly suggests that inadequate sleep is a risk factor for obesity. As such, the report recommends childcare regulatory agencies require providers to implement practices that promote age-appropriate sleep durations. Newborns may need up to 18 hours of sleep per day, while toddlers and preschoolers may require up to 14 or 13 hours, respectively, in a 24 hour period.

Chicago

CLOCC's 2009 obesity prevalence study found that 22% of Chicago children were obese when first entering school (ages 3 – 7).[20] For these children, the factors related to their weight status took effect in early childhood.

In Illinois, about 70% of mothers begin breastfeeding their newborns, but only 35% are breastfeeding their infants exclusively at three months. Chicago mothers breastfeed at even lower rates.[21] [22]

At the end of 2011, there were no officially designated Baby-Friendly hospitals in Chicago and just two in the state of Illinois. (Baby-Friendly hospitals employ proven practices and policies that lead to higher rates of breastfeeding.)

According to a report published by Illinois Action for Children using 2004 Illinois Department of Human Services data, over 60,000 children under 5 years of age in Cook County were in licensed childcare in 2004, and an additional 42,000 were in license-exempt care.[22] In their review of state-level childcare regulations, Kaphingst and Story examined policies in all fifty states that covered childcare centers (CCCs) and small family childcare homes (SFHs).[15] They found that many states rely on the federal Child and Adult Care Feeding Program for nutrition guidelines, with more focusing on CCS than SFHs. Also, no state licensing regulations mandated that childcare facilities meet specific nutrient-based standards, with only two states instructing childcare settings to comply with the *Dietary Guidelines for Americans* (Illinois was not among them). Very few states set limitations on foods of low nutritional value, and, while Illinois did so for CCCs, they did not for SFHs. Only four states had a policy on vending machines in childcare settings; again, Illinois was not included among these. Although requirements for large muscle or gross motor activity and outdoor activity time were found to exist for both settings across most states, only a very few set minimums for amount of time spent in physical activity and made recommendations for levels of activity (e.g., moderate, vigorous). Illinois did not have these more specific requirements in place. Also, while Illinois regulations defined appropriate inclusion of media in childcare program activities for CCCs, maximum time limits for screen-time were not set for any type of facility.

Current Strategies/Progress to Date

In Chicago,

14 of 19

hospitals with labor and delivery units are on the way to achieving Baby-Friendly Hospital designation.

By the fall of 2012, as part of Chicago's Healthy Places initiative (www.healthyplaceschicago.org), 14 of Chicago's 19 hospitals with labor and delivery units were on the way to achieving designation as Baby-Friendly hospitals, and an impressive ten of these hospitals were already in phase two (out of four) of the process. In addition, a pilot program in the Rogers Park neighborhood to encourage local businesses to self-designate as breastfeeding-friendly was underway with strong participation from the business sector. A number of statewide efforts (including the 2012 Hospital Infant Feeding Act) will supplement this hospital-focused work and improvements across the state of Illinois for breastfeeding support will have a positive impact in Chicago.

Systems of authority over childcare are complex, with states having jurisdiction over most settings and cities and towns having more limited authority. Illinois and Chicago are no exception. Therefore, in order to improve policy for childcare settings in Chicago, state-level changes must occur. Chicago does have some authority over some aspects of childcare practices and has been making strides to strengthen them. In 2009, the Chicago Board of Health and the Chicago Department of Public Health (CDPH) passed a joint resolution to strengthen standards for nutrition, physical activity, and screen time in licensed childcare centers under CDPH's purview. In 2011, requirements for the use of low- or no-fat dairy were included for children over the age of two. To support effective implementation of these new standards, CDPH, the Erikson Institute, Illinois Action for Children, and CLOCC developed a training program for childcare providers to help them align their practices with the new evidence-based nutrition, activity, and screen time standards.

Recommendations for the Next Decade

Goal 1: Ensure the health of women before and during pregnancy.*

Objective 1-1: Encourage good nutrition, physical activity, and healthy weight and weight gain for women before and during pregnancy.

Objective 1-2: Eliminate (or prevent) fetal exposure to tobacco and environmental toxins.

Goal 2: Promote the consumption of nutritious foods for 0-5 year olds.

Objective 2-1: Encourage breastfeeding.

- **Strategy a:** Support obstetricians, gynecologists, and pediatricians to discuss breastfeeding with mothers and families.
- **Strategy b:** Support hospitals with labor and delivery units to promote successful initiation of breastfeeding.
  - **Tactic:** Implement the Baby Friendly Hospital Initiative (BFHI).
  - **Tactic:** Support adoption of 10 Steps to Successful Breastfeeding (from BFHI) for hospitals that cannot commit to the BFHI.
- **Strategy c:** Improve community environments to support breastfeeding women.
  - **Tactic:** Ensure that Chicago communities adhere to the State of Illinois 2004 Right to Breastfeed Act.
  - **Tactic:** Ensure that Chicago workplaces adhere to the State of Illinois 2001 Nursing Mothers in the Workplace Act.
  - **Tactic:** Implement a breastfeeding friendly business initiative in which local businesses are designated as a breastfeeding-friendly location.
- **Strategy d:** Support breastfeeding mothers to encourage and facilitate breastfeeding.

Objective 2-2: Support healthy nutrition for 0-5 year olds at home and in the family.

- **Strategy a:** Develop education program(s) to educate mothers and families of infants (or expectant families) about proper nutrition from 0-5. (See **Health Promotion and Public Education** section)
- **Strategy b:** Build capacity of organizations/institutions serving families of 0-5 year olds (or expectant families) to train/educate families about proper infant/toddler nutrition.

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* We include broad goals and objectives for ensuring that women are healthy leading up to and during pregnancy based on factors found to influence weight in early childhood. We do not, however, list specific strategies and tactics. Interested readers should refer to the U.S. Department of Health and Human Services' www.womenshealth.gov section on pregnancy.

Objective 2-3: Ensure proper nutrition in childcare settings.

- **Strategy a:** Provide support through policy and environmental change in childcare centers and homes that enable breastfeeding mothers to supply breast milk to their infants/toddlers.
  - **Tactic:** Train staff and provide equipment for breast milk storage.
  - **Tactic:** Provide adequate space in childcare settings for women to breastfeed their infants/toddlers.
- **Strategy b:** Ensure nutritious meals and snacks for children in childcare, following the age-appropriate *Dietary Guidelines for Americans* and USDA MyPlate recommendations.
  - **Tactic:** Provide training for childcare providers on national nutrition guidelines and on Chicago standards for food and beverage in childcare.
  - **Tactic:** Ensure that childcare centers have access to foods and beverages (through on-site preparation, off-site vendors, or community food and beverage retail) that enable them to meet national and Chicago guidelines and standards for food and beverage in childcare. (See **Food and Beverage Access** section)
  - **Tactic:** Train and support childcare providers to include age-appropriate nutrition lessons into regular curriculum, including on-site gardens or linkages to community gardens to educate young children about where food comes from.
  - **Tactic:** Engage parents and families of children in childcare through education about healthy nutrition practices and informing them about food and beverage policies in childcare settings (including policies about food and beverage from home).
- **Strategy c:** Limit children's exposure to food marketing while in childcare through screen time standards and limits and by following laws and regulations pertaining to advertising in educational settings. (See **Business Sector and Industry Practices** section)

Goal 3: Promote physical activity in 0-5 year olds (ensure all children 0-5 learn developmentally appropriate fine and gross motor skills to help them lead a physically active life).

Objective 3-1: Support physical activity for 0-5 year olds at home and in the family.

- **Strategy a:** Develop education program(s) to educate mothers and families of infants (or expectant families) about age-appropriate physical activity and motor skills development for 0-5 year olds. (See **Health Promotion and Public Education** section)
- **Strategy b:** Build capacity of organizations/institutions serving families of 0-5 year olds (or expectant families) to provide to children or educate families about proper infant/toddler physical activity and motor skill development.

- **Strategy c:** Promote and link families to programs and services that engage children in age-appropriate physical activity (including community-based organizations, city parks and playgrounds, and cultural institutions).

Objective 3-2: Ensure age-appropriate physical activity in childcare settings.

- **Strategy a:** Ensure childcare environments contain sufficient and age-appropriate space and equipment for indoor and outdoor physical activity.
  - **Tactic:** Ensure effective implementation of established standards pertaining to physical activity space and equipment for childcare settings.
  - **Tactic:** Provide financial or in-kind support to childcare settings to ensure they have sufficient space and equipment for age-appropriate physical activity on-site.
  - **Tactic:** Promote the use of community space for physical age-appropriate physical activity (e.g., parks, playgrounds, cultural institutions) by children in childcare during the childcare day and under the supervision of childcare providers.
- **Strategy b:** Ensure the implementation of established guidelines and standards for age-appropriate physical activity (structured and unstructured) during the childcare day.
  - **Tactic:** Train staff on national, state, and local standards that meet evidence-based and best-practice recommendations for age-appropriate physical activity.
  - **Tactic:** Provide toolkits, curricula, and easy-to-follow instructions for age-appropriate games and physical activity to increase provider confidence and capacity to lead physical activity for children in childcare.

Objective 3-3: Ensure that community environments support age-appropriate physical activity for children under the age of five. (See **Physical Activity and the Built Environment** section)

- **Strategy a:** Ensure that street/sidewalk infrastructure can accommodate 0-5 year olds (with specific attention to visibility and pedestrian crosswalk countdown timers).
- **Strategy b:** Ensure that public space accommodates activity among 0-5 year old (e.g., parks, playgrounds, cultural institutions).
- **Strategy c:** Ensure safe walking routes between childcare settings and nearby community resources for field trips, physical activity, and healthy eating.
  - **Tactic:** Implement CLOCC's Neighborhood Walkability Initiative with childcare providers and parents of children in childcare.

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5

Business Sector and Industry Practices

CONSORTIUM TO LOWER OBESITY IN CHICAGO CHILDREN

Business Sector and Industry Practices

Nationwide and in Chicago

One-quarter of a working adult's life is spent in the workplace. Places of employment are vitally important settings for sharing information and resources with parents and caregivers that will help them create healthy environments in the home for children. Worksites can also reinforce healthful practices of employees themselves, enabling them to be good role models of healthy living for their children. There is strong evidence that changes in the worksite food environment can positively influence employee diet, health, and BMI.[1] [2] [3] [4] For example, by providing healthier foods and beverages in company cafeterias and meetings and stocking them in company vending machines – while also limiting the availability of less healthy products – employers can measurably improve the healthfulness of employee consumption. These practices also have protective benefits for children: a child is three times more likely to be obese if one parent is overweight or obese, and 13 to 15 times more likely if both parents are overweight or obese.[5]

Industries directly involved in producing food or beverages have an even greater opportunity – and responsibility – to manufacture and market healthful products for children. However, some manufacturers are reluctant to shift their product portfolios to include a greater proportion of items that meet nutritional guidelines. For example, a review of 3,039

A child is

3x

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13-15

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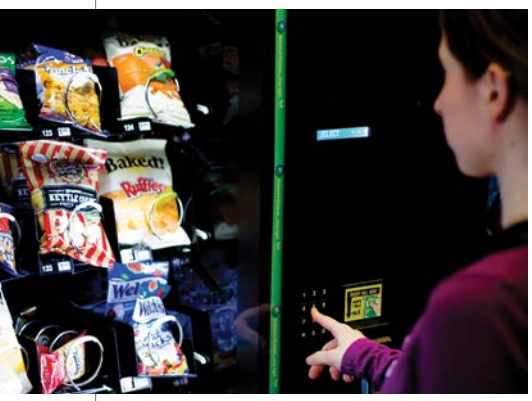
98%

of food advertisements viewed by children are for products high in fat, sugar, or sodium.

children's meal combinations in fast food chain restaurants found that only 12 of them (less than 1%) met nutrition standards for preschoolers.[6] The food and beverage industry spends about $2 billion per year marketing to children, and almost all (98%) food advertisements viewed by children are for products high in fat, sugar, or sodium.[7] [8] Cereal manufacturers employ "adver-gaming" and child-friendly websites as well as more traditional print, radio, and television advertising to market their least nutritious cereals, while investing few or no dollars in similar vehicles for advertising their healthiest products.[9] This advertising has a very real and negative impact on children: the National Academies of Science found a causal relationship between television advertising and the food and beverage choices, purchase requests, and short-term consumption practices of children ages two through 11.[10] Also, sugar-sweetened beverages are the single largest source of added sugar and calories in the American diet.[11]

Current Strategies/Progress to Date

Workplaces across the city are implementing strategies to keep Chicago's workforce healthy. The city's third-largest employer, the City of Chicago, is implementing an employee wellness initiative that includes strategies for healthy weight. Vanguard Health Chicago, with more than 6,000 employees (including one location in the City of Chicago), is eliminating sugar-sweetened beverages from its facilities. The Chicago Park District has set strong nutritional standards for food sold in vending machines, which affects employees as well as patrons. Also, on November 15, 2012, Mayor Rahm Emanuel submitted an ordinance to City Council to enter into a healthy vending contract for all city buildings.



Worksites have long been implementing strategies to promote employee wellness through incentives, educational programming, and other initiatives. Less available, however, are programs that focus on the health of employees' children. CLOCC will soon be offering a *5-4-3-2-1 Go!* Workplace Toolkit, based on its public education message, to support employers who are ready to help employees create healthful home environments for their families. (See **Health Promotion and Public Education** section)

Recommendations for the Next Decade

Goal 1: Implement activities in the workplace that support childhood obesity prevention.

Objective 1-1: Encourage companies to provide programs and services to improve the health and wellness of the children of their employees.

- **Strategy a:** Offer workplace training/education/coaching for employees with children to help them create healthy families.
- **Strategy b:** Provide health and wellness benefits to employees with children including education, support, and incentives for developing healthier lifestyles.

Objective 1-2: Support employees to serve as role models of healthy eating and physical activity for children.

- **Strategy a:** Ensure that all workplace vending options contain exclusively healthy food and beverage options.
- **Strategy b:** Provide healthy food and beverages in employee cafeterias and dining rooms.
- **Strategy c:** Provide healthy food and beverages at all meetings and events.
- **Strategy d:** Provide workplace athletic facilities or financial support for employee use of external athletic facilities and classes.

Objective 1-3: Support healthy eating and physical activity for the children of employees.

- **Strategy a:** Offer healthy foods and beverages at all events where employees' children are present (e.g., company vacations and/or business trips, parties, picnics).
- **Strategy b:** Make workplace athletic facilities available to employees' children after work/on weekends and/or provide financial support to children of employees for external athletic facilities and classes.
- **Strategy c:** Provide incentives for employees to support their children's physical activities.
  - **Tactic:** Provide options to take time off for coaching children's school or recreational sports teams, travel to children's athletic events, or participate in other opportunities that support children's physical activity.
  - **Tactic:** Provide discounts and incentives through insurance plans for children's participation in physical activities.
- **Strategy d:** Provide physical activity options for all ages and physical abilities as part of planned recreation at all company events and outings.

Goal 2: Align business activities and funding in the community with childhood obesity prevention.

Objective 2-1: Invest in and support childhood obesity prevention organizations.

- **Strategy a:** Create opportunities for employees to volunteer with organizations that promote healthy lifestyles for children.
- **Strategy b:** Focus corporate giving/social responsibility activities toward organizations that support healthy lifestyles, physical activity, healthy food access, and/or safe community activity environments for children.

Objective 2-2: Invest in and support access to safe opportunities for physical activity in communities. (See **Physical Activity and the Built Environment** section)

- **Strategy a:** Provide community access to worksite exercise spaces after work hours.

- **Strategy b:** Provide financial and other resources to communities to build physical activity spaces (e.g., parks, playgrounds, pedestrian and bicyclist-friendly sidewalks and streets).

Objective 2-3: Invest in and support access to healthy food in communities. (See **Food and Beverage Access** section)

- **Strategy a:** Provide financial and/or volunteer support to healthy food and beverage retail establishments (including corner stores, farmers' markets, mobile produce vendors).
- **Strategy b:** Provide financial and/or volunteer support to emergency food distribution programs that set effective healthy food and beverage policy.
- **Strategy c:** Invest in the development of technologies that support improved access to and purchasing of healthy food.
- **Strategy d:** Support local healthy food and beverage production by purchasing locally produced healthy food and beverages for workplace food and beverage needs.

Goal 3: Align company products and services with childhood obesity prevention.

Objective 3-1: Improve the nutritional content of food and beverage products.

- **Strategy a:** Align nutritional content of foods and beverages with *Dietary Guidelines for Americans.*
- **Strategy b:** Participate in federal, state, or local programs to transition industry regulations and products to meet *Dietary Guidelines for Americans*.

Objective 3-2: Increase the sale of healthy food and beverage options.

- **Strategy a:** Market only healthy food and beverage products to children under age 18 in all mediums.
- **Strategy b:** Increase marketing of healthy products in popular media, social media, and at points where consumers make purchasing decisions to increase demand.
- **Strategy c:** Structure product pricing to offer healthy products at prices that are similar to or lower than those of less healthy options.

Objective 3-3: Develop and implement business strategies and approaches to supporting physical activity.

- **Strategy a:** Create new products and/or services that support and facilitate physical activity.
- **Strategy b:** Expand the development of games and toys marketed to children under 18 that increase physical activity (e.g., exer-gaming).

Objective 3-4: Increase the availability of goods and services that promote physical activity.

- **Strategy a:** Increase the marketing of active lifestyle products and services to children under age 18.

- **Strategy b:** Expand availability of safety equipment (e.g., bicycle helmets, protective footwear, and clothing) to children in communities experiencing disparities in obesity and physical activity, especially if such equipment is required by law or institutional policy.

Goal 4: Support activities that reduce or eliminate marketing of unhealthy products to children under 18 years of age.

Objective 4-1: Standardize and monitor compliance with policies established to govern food marketed to children under 18.

- **Strategy a:** Identify industry practices in the State of Illinois and City of Chicago related to foods marketed to children and identify opportunities to align these practices with obesity prevention approaches through state and local authority (e.g., action by the Illinois Attorney General, policies established by state and local authorities).
- **Strategy b:** Enforce the elimination of marketing of unhealthy foods at any time on school property, school sponsored or affiliated events, or in school materials including websites, social media, publications, and childcare environments.
  - **Tactic:** Eliminate the use of company logos, characters, and mascots associated with unhealthy food products.
  - **Tactic:** Remove food and beverage company logos from the outside of all vending machines.

Objective 4-2: Support the establishment and implementation of approaches to inform consumers of nutritional composition of foods and beverages sold and served in Chicago.

- **Strategy a:** Monitor and ensure the implementation of new menu labeling regulations established under the Affordable Care Act.
- **Strategy b:** Support local innovation to improve menu labeling practices as allowable by local, state, and federal law.

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6

Health Promotion and Public Education

Health Promotion and Public Education

Teen-oriented poster for CLOCC's *5-4-3-2-1 Go!* message.

Nationwide

Public education plays a key role in raising awareness of public health issues and putting the power into the hands of communities to make informed decisions. However, educational strategies alone will not suffice to address the magnitude and complexity of the obesity epidemic. When coupled with the policy, systems, and environmental interventions described in earlier sections of this blueprint, public education can motivate individuals to change behaviors and adopt healthy, active lifestyles.

The food and beverage industry uses the power of media messaging to encourage consumers to choose their products. Children and youth are exposed to significant amounts of marketing for high-fat and high-sugar foods and beverages, and these foods are abundant in children's actual diets.[1] Research has documented that children under the age of eight are often unable to distinguish marketing tactics from other forms of information.[2] Racial and ethnic minorities are exposed to a disproportionate amount of junk food advertising and are directly targeted with high-calorie and low-nutrient foods and beverages.[3]

To combat these health-compromising messages, coordinated and sustained social marketing programs are needed to make a meaningful impact on health behaviors.[4] "Social marketing" refers to the systematic use of marketing strategies to achieve specific behavioral goals for a

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marketing tactics from other forms of information.

5-4-3-2-1 Go! is a public education message that has been widely used in Chicago, across the state, around the country, and beyond.

social good. These marketing efforts should communicate clear behavior goals, be highly tailored to audience characteristics, and coordinate dissemination to maximize number of exposures.[5] Particular attention should be paid to achieving health equity and protecting vulnerable populations. Social marketing should be employed in order to tell the story of the economic and social costs of obesity, to provide clear recommendations about positive health behaviors, and to mobilize communities to act.[4] Many communities have long-standing systems for disseminating information such as neighborhood newsletters, bulletins from faith communities, and local media. These assets should be leveraged in social marketing campaigns.

While social marketing can motivate people to change behavior, public education campaigns can help them gain specific knowledge to support behavior change. Public education should not simply implore people to change behaviors, but rather support positive health behaviors "by fostering healthy, engaged communities, and effective health care delivery systems, supported by enlightened health policy."[6] Obesity prevention messages should be focused on the behaviors over which individuals have autonomy (e.g. portion control, daily physical activity) rather than the outcomes (e.g. health status, weight).[7] In addition, messaging should educate the public about the importance of environments that support healthy eating and physical activity, prompting them to advocate on behalf of environmental change strategies that make healthy lifestyles easier to achieve. In this way, public education can offer prevention-oriented solutions that help individuals to be responsible for their own health while also pointing out the broader institutional, community, and societal factors beyond their direct control, providing solutions for change at all levels of social ecology. (See **Introduction/Social Ecology** section)

Public education efforts focused on obesity prevention can draw on lessons learned from other public health campaigns, especially those aimed at reducing tobacco use. Characteristics of campaign messages that are particularly effective include those that evoke strong emotions, employ pro-health messages, and highlight industry's misleading marketing and promotional tactics.[8]

Health promotion programs can also play a key role in engaging families in initiating and maintaining healthy lifestyles. Different than health education, health promotion programs include education but also develop capacity and skills among participants to further support behavior change. The Cochrane Collaboration, an international network that conducts and disseminates systematic reviews of primary research in health care and health policy, has identified key elements of effective childhood obesity prevention programs based on a recent meta-analysis. Some common elements of effective interventions, which should be embedded in health promotion programs include:

- Integrating healthy eating, physical activity, and body image into a comprehensive curriculum.
- Building capacity of staff in youth-serving settings with health promotion strategies and activities.
- Encouraging parent support for physical activity, limiting screen time and healthy eating in the home environment.[9]

Programs conducted in safe community environments allow for familiarity, open communication, and trusting relationships, which have been shown

to be important elements for developing social support networks.[10] These networks build peer support for sustaining healthy lifestyle behaviors and work to shift community norms.

Chicago

In the fall of 2011, the Illinois Health Survey for Youth was administered as part of the Healthy Places initiative to 866 Chicago parents of children ages 0-17. Only 21.8% of children consumed five or more servings of fruits or vegetables the previous day, only 38.7% drank 4 or more servings of water, and only 30.7% consumed three or more servings of low-fat dairy the previous day. Twenty-eight percent of children engaged in two hours or less of screen-based activity (e.g., television, video games), and only 9.3% were physically active for one or more hours each day over the seven days prior to the interview.[11] These data suggest that aggressive and comprehensive approaches are still needed to support Chicago children in meeting recommendations for healthy behaviors related to obesity prevention.

This print ad was part of the Healthy Places public education campaign, *Help Make It Happen*.

Current Strategies/Progress to Date

One of CLOCC's hallmark strategies is the dissemination of the healthy lifestyle message, *5-4-3-2-1 Go!*®. Focused on children, the message recommends the following daily goals for food and physical activity behaviors: 5 servings of fruits and vegetables, 4 servings of water, 3 servings of low-fat dairy, 2 or less hours of screen time, and 1 or more hours of physical activity.

Developed by CLOCC in 2004 and launched as a mass-media campaign in 2009, *5-4-3-2-1 Go!* has reached millions of individuals in communities throughout Chicago and beyond. The message has been downloaded for use by thousands of organizations in Chicago, across 49 states, and in several countries. It has been adopted by the City of Omaha, the State of Michigan, and several Chicago-area coalitions (including DuPage County's FORWARD initiative and the City of Chicago's Inter-Departmental Task Force on Childhood Obesity).

CLOCC staff lead training sessions on the message, enabling both private and public sector organizations to integrate it into their programs and services, create organizational environments that support the message (such as offering healthy snacks and encouraging physical activity), and communities to adopt these recommendations. To date, staff from over 1,200 community-based organizations have been trained to disseminate the *5-4-3-2-1 Go!* message at their sites.

5-4-3-2-1 Go! **materials have been used by**
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In 2009, an evaluation of the CLOCC-led mass-media campaign indicated that message exposure led to small degrees of change in a few of the recommended behaviors.[12] In a study of the message's use in a clinical setting, patients of medical residents trained to deliver it reported positive changes in fruit, vegetable, and water consumption; physical activity; and decreased television time than patients of residents who were not trained to deliver the message.[13] The combination of these two studies and the research cited above reinforces the notion that public education campaigns may be effective in reaching many people, raising awareness, and influencing some degree of change. However, the degrees of change required to stem the tide of the childhood obesity epidemic will require

more personally-directed health education interventions coupled with institutional, community, and societal change that make recommended behaviors easier for individuals to follow.

An image from Healthy Places' *Help Make It Happen* campaign.

In 2012, the Chicago Department of Public Health and CLOCC mounted a public education campaign as part of the Healthy Places initiative (www.healthyplaceschicago.org) that emphasized the role of environments in obesity prevention. The "Help Make It Happen" campaign pointed out key ways in which Chicago environments prohibit breastfeeding, healthy eating, and physical activity and suggested community and city-wide improvements that could lead to healthier behavior. The campaign delivered over 25 million impressions through radio, print, online placements, and on CTA vehicles and bus kiosks. Eighteen hundred campaign posters were also distributed across Chicago, and large banners were hung in City Hall.

Recommendations for the Next Decade

Goal 1: Employ public education efforts to improve individual nutrition and physical activity behaviors.

Objective 1-1: Improve message environments by promoting healthy foods and beverages in high visibility locations where children and their caregivers are most likely to encounter them.

- **Strategy a:** Disseminate *5-4-3-2-1 Go!* and complementary messages using methods that are focused to reach audiences that experience disparities in obesity and health, communicate clear behavior change goals, and are linked to environmental change.
- **Strategy b:** Include nutrition education messages at points-of-purchase (i.e., where consumers make actual purchasing decisions) to promote healthy food and beverage consumption.
- **Strategy c:** Integrate social marketing as an element of environmental change to raise awareness and create consumer demand for healthy food and physical activity resources while also improving the aesthetics of community environments (e.g., include murals that promote healthy behaviors in neighborhood beautification projects).

Objective 1-2: Create a regional message environment to promote clarity and consistency of health promotion and public education for nutrition, physical activity, and screen time for children.

- **Strategy a:** Disseminate evidence-based health messages in key sectors across the region (e.g., beyond Chicago to Cook and other counties) to increase exposure among children and caregivers who travel frequently across city boundaries into suburbs and outlying areas.
- **Strategy b:** Develop media partnerships in regional media markets (which extend beyond city and county boundaries) to shape public discourse about healthy eating and active lifestyles.

Objective 1-3: Provide training and technical assistance to build capacity for health education in key settings where children spend their time.

- **Strategy a:** Train and support health care providers to offer pediatric patients and their caregivers counseling and supporting materials on healthy lifestyles and healthy weight.
- **Strategy b:** Train and support early childhood, elementary, and secondary education professionals to engage in health promotion using evidence-based nutrition and physical activity curricula.
- **Strategy c:** Train and support community health workers who provide culturally and linguistically appropriate community and in-home education to integrate obesity prevention education into their services.

Goal 2: Implement public education campaigns that build public support for environmental change.

Objective 2-1: Use mass media campaigns and other messaging approaches to mobilize communities around health priorities for obesity prevention with clear environmental change goals.

- **Strategy a:** Implement campaigns that include a clear call to action with opportunities to engage in community and city-level advocacy for environmental change.
- **Strategy b:** Build capacity of local leadership to communicate about the importance of healthy food and the physical activity environment.
- **Strategy c:** Build capacity of youth's role as advocates in their communities.

Goal 3: Implement health education programs specifically designed to reach individuals in communities experiencing high levels of obesity.

Objective 3-1: Provide programming to build health literacy, knowledge, and skills around healthy eating and physical activity in communities experiencing high levels of obesity.

- **Strategy a:** Implement programs that are theory-driven and evidence-based, including those that are family-centered, involve experiential learning, and build self-efficacy around targeted behaviors (e.g., cooking/nutrition programs, gardening education, grocery store tours).
- **Strategy b:** Expand opportunities for healthy lifestyle education in the Women, Infants, and Children program (WIC); the Supplemental Nutrition Assistance Program (SNAP); and other aspects of the emergency food systems to reach the most vulnerable populations.
- **Strategy c:** Provide education about preparing nutritious meals on a limited budget for families experiencing food insecurity.

Health promotion programs for obesity prevention include skill building as well as education about nutrition and physical activity.

Objective 3-2: Expand supportive environments and networks of social support for healthy eating and physical activity in the community setting.

- **Strategy a:** Align organizational policies and practices to support health promotion messaging and enable staff to model healthy behaviors for program participants.
- **Strategy b:** Implement health education programs in important community settings (e.g., faith-based institutions, workplaces, schools) so members of existing social networks can support each other's effort to adopt healthy behaviors.

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