A Tale of Two ObesCities

Comparing responses to childhood obesity in London and New York City

Municipal Responses to Childhood Obesity Collaborative

City University of New York and London Metropolitan University

EXECUTIVE SUMMARY

In the last 25 years, childhood obesity rates in London and New York City have more than doubled, creating epidemics that now threaten the well-being of current and future residents, widen existing socioeconomic and racial/ethnic inequities in health, and impose a growing economic burden. Each city has initiated a variety of policies and programs to reduce childhood obesity, but few policy makers or researchers believe that the current responses are adequate to reverse the increases in obesity. Both the US and England have recently seen a modest slow down in the rate of increase of childhood obesity. While it is too soon to know if these declines will be sustained, the two cities now have an opportunity to accelerate and amplify efforts to reverse the trend of the past 25 years.

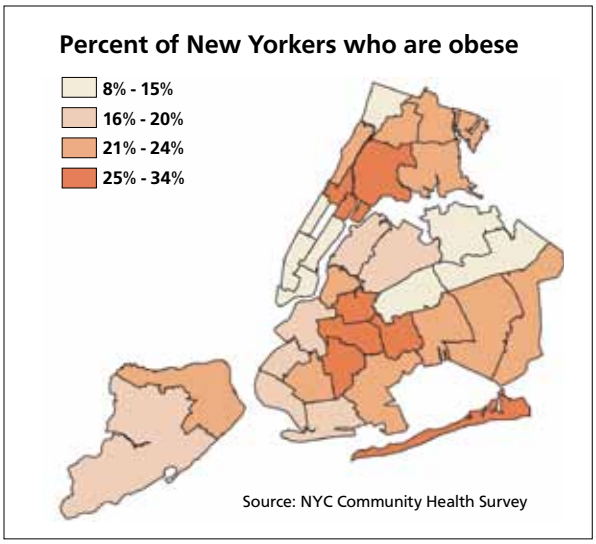
In 2008 and 2009, the City University of New York and London Metropolitan University convened health officials, researchers, advocates and city leaders from London and New York to analyze their epidemics of childhood obesity, compare municipal responses and recommend strategies for reversing these epidemics. By looking in detail at how two leading world cities have responded to childhood obesity, we hope to learn lessons applicable to other cities and to identify areas where our two cities could learn from others. We also expect to gain insights that will help each city to better assist its diverse communities to meet the unique needs of its residents and to reduce the suffering that obesity imposes. This report summarizes our findings.

Why devote attention to childhood obesity in cities now? First, the dramatic increase in rates of overweight and obesity in many cities around the world presents a clear and present danger to future global health. Obesity is increasingly associated with chronic conditions—diabetes, heart disease, high blood pressure and some forms of cancer –that will impose a growing burden on societies around the world. Obese children are more than twice as likely to become obese adults, demonstrating the value of preventing childhood obesity in order to promote adult health. As more people move into cities, urban health problems become global health problems. Moreover, obesity-related chronic conditions are a driving force in the socioeconomic and racial/ethnic inequities in health that are found both within cities like London and New York and between developed and developing countries. Finding ways to narrow these gaps is an urgent health priority.

Second, childhood obesity poses a large and growing economic burden. A CDC study estimated that the medical costs of treating obesity-related diseases in the United States (US) were as high as $147 billion (£738 million) in 2008*. In the United Kingdom (UK), it is estimated that the current costs of obesity will double by 2050. Obesity-related expenses include treatment costs, lost productivity and the social costs of premature mortality. Finally, the obesity epidemic intersects with other urban and global crises such as the financial crisis and climate change. These linkages present both opportunities for multisectoral change (e.g., improving walkability in cities can reduce obesity and energy use) and constraints (e.g., as healthy food becomes more expensive, poor families are more likely to purchase unhealthy food). Taking action now can help to resolve obesity and its related problems before they escalate further.

*References for the Executive Summary can be found in the full report which is available at http://web.gc.cuny.edu/che/childhood_obesity.pdf

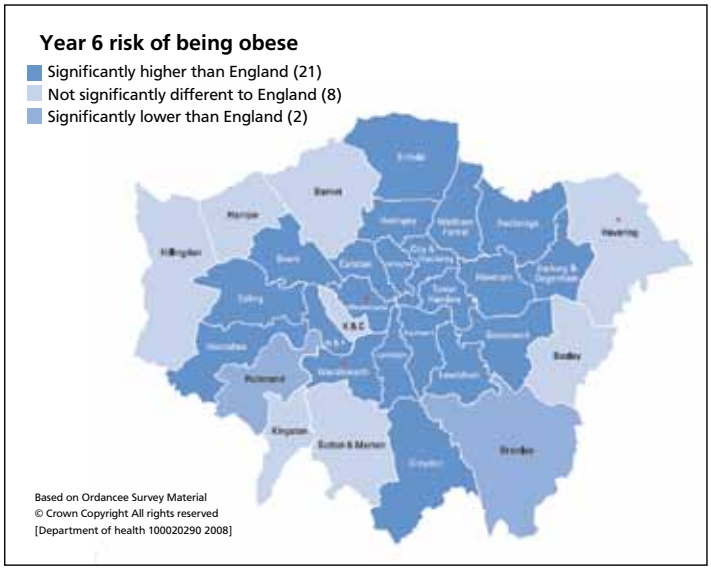
COMPARISON OF EPIDEMICS



In both London and New York City, childhood obesity rates are higher than in the United Kingdom and the United States as a whole. Although differences in data collection make it difficult to make exact comparisons, in London nearly 23% of children entering school are overweight or obese –10.9% are obese and 12% are overweight. By year 6 of school this increases to 36.3% with 21.6% designated as obese and 14.7% overweight.[1] In New York City, nearly 40% of public school children in grades K-8 are overweight or obese. Specifically, 21% of young people are obese and 18% are overweight. In children, overweight is usually defined as having a body mass index(BMI), a measure of body fat based on height and weight, at or above the 85th percentile for age and gender and obesity as having a BMI at or above the 95th percentile.

In both cities, obesity rates are higher in boys than girls and overweight and obesity increase with age. Both cities show big differences in obesity rates by neighborhood and racial/ethnic groups. In New York City, for example, about a third of teens living in the cities' poorest neighborhoods are overweight or obese compared to only a quarter of teens in other city neighborhoods. In London, Hackney has a childhood obesity rate twice as high as in two more affluent areas, Bromley and Richmond upon Thames (14% vs. 6-7%).

Both cities also show striking variation in obesity rates by race and ethnicity. At age 10-11, Black children in London who are from Africa, the Caribbean or other regions had obesity rates of 25% or more while children who were white British, Irish or mixed Asian-White had rates lower than 20%. In New York City, a 2004 study of elementary school children found that Hispanic children had the highest obesity rate, 31%, followed by Blacks at 23%, Whites at 16% and Asians at 14.4%. In each city, any response to childhood obesity must seek to reduce these age, gender, income, neighborhood and race/ethnicity differences.



Finally, both London and New York are characterized by high levels of income inequality and these growing differences between the rich and the poor contribute to the increasing concentration of obesity among poor children. Although all income levels are affected by obesity, recent increases in obesity reflect one more cost of economic policies that cause one part of the population to experience the best of times and another the worst.

COMPARISON OF MUNICIPAL RESPONSES

Municipal governments are uniquely positioned to play a leading role in reducing obesity. Both London and New York City have responded to rising rates of childhood obesity but these responses are shaped by their differing approaches to municipal governance, health care, public transportation and education. By understanding these differences, the two cities may be better able to tailor their response to their unique context and also to apply more skillfully lessons learned elsewhere.

For example, in the United Kingdom, the national government has primary responsibility for health care and education, providing stable and consistent funding and standards for these services but limiting London's autonomy to initiate local action. In recent years, London's government has played a forceful role in transportation policy, encouraging use of mass transit, walking and bicycling, making it easier for residents to find opportunities for physical activity.

In New York City, a strong mayor and relatively weak legislature offers more opportunities for executive branch action. In the past eight years, a mayor concerned about health has used this authority to take action on school food, new bicycle lanes, and improved food procurement guidelines for city agencies. However, inadequate funding for health care and education, especially for the city's poorest residents, sometimes means that deficiencies in the basic necessities of life—adequate housing, education and health care—understandably make obesity reduction a lower priority than daily survival.

Finally, in both cities, financial and business interests have a strong voice in governance and policy making. Thus, when the interests of real estate developers, the financial industry, or foodservice and restaurant trade associations conflict with those of low-income children and families, the powerful usually have more clout to advance their interests than the poor. For example, when Pepsi Cola threatened to move its bottling plant out of New York when the state considered imposing a tax on sweetened beverages, the Governor withdrew the proposal despite advocacy by children's health groups. More basically, in both cities, proposals to close the widening gap between incomes and living conditions for the poor and the better off meet almost uniform opposition from business elites, closing the door to modifying a fundamental cause of the rise in obesity.

Recommendations

To strengthen the two cities' response to childhood obesity and to accelerate efforts to reverse the epidemic of childhood obesity, the CUNY/ London Met Childhood Obesity Collaborative recommends that city governments in London and New York take the steps listed below. These recommendations emerged from our review of current activities to reduce childhood obesity in London, New York and other jurisdictions. They were selected based on their estimated impact, their political feasibility over the next decade, and their potential for mobilizing diverse constituencies. We suggest a mix of modest and more transformative changes in order to advance a balanced portfolio of strategies. We deliberately suggest aspirational changes in the hopes of widening the current policy discussions on childhood obesity.

In particular, we propose as a priority that London and New York City each adopt the most promising approaches the other city has developed, showing the benefits of world cities learning from each other. In future work, the Collaborative will rate each city's progress on these recommendations, propose specific actions each city can take to amplify and sustain its response, and identify opportunities for more systematic coordination in efforts to reduce childhood obesity both within and between the two cities. The recommendations are listed from the broadest citywide actions to more community-based proposals but are not listed in order of their importance.

LAND USE AND PLANNING

1. Use zoning authority, land use review and other municipal authority to limit access to fast food and the promotion of unhealthy foods to children.
2. Use zoning, tax incentives, and city owned property to increase the availability of healthy, affordable, and culturally appropriate food in neighborhoods where it is limited.
3. Incorporate active design principles into building codes, housing strategies, and neighborhood planning.

FOOD

4. Set standards for municipal purchase of food in public agencies and leverage economies of scale to promote food systems that support economic, environmental, and human health.
5. Redefine food safety standards to reflect current threats to health and create new ways to use the municipal food safety workforce to promote healthier eating.

PARKS AND GREEN SPACE

6. Promote and support urban agriculture as a sustainable and health promoting use of green space.
7. Increase access to and safety of places where people can be physically active.

TRANSPORTATION

8. Promote walking and cycling, especially in neighborhoods with high levels of childhood and adult obesity.

SCHOOLS

9. Implement a universal free school meal program with nutritional standards that promote health.
10. Provide drinking water in schools by improving infrastructure for tap water delivery and bathrooms.

RESEARCH AND TRAINING

11. Promote research that helps cities understand how to best address health inequalities and childhood obesity by:
    - Developing and improving the data systems that monitor childhood obesity so that cities can track and report citywide prevalence as well as information about social, economic, and geographic disparities;
    - Tracking the cost and outcomes of municipal policies and programs that address childhood obesity and disseminate this work internationally;
    - Documenting the adverse impact of food marketing practices on children and designing and evaluating strategies to reduce this influence;
    - Finding the best ways to prepare health providers, educators and others to reduce childhood obesity; and
    - Using urban planning as a tool for assessing and changing the built environment to promote health.

Today, both London and New York and their city governments deserve credit for taking action on many fronts to reduce childhood obesity. Few experts believe, however, that current levels of effort are sufficient to avert the growing health, social and economic costs that childhood obesity imposes on our cities. To actually improve health, the modest and small-scale changes that have begun will need to be expanded, strengthened and sustained. Our children and grandchildren depend on us to develop the policies, programs and environments that assure their health and close the gaps in well-being that now divide our cities' residents. By confronting childhood obesity directly, London and New York can show other cities around the world that just as our societies created the conditions that led to rising rates of obesity, so can we reverse this global trend. By engaging those most harmed by the current epidemic, advocates can build a powerful force for change. A Tale of Two ObesCities suggests some steps we can take to realize these obligations and opportunities.

CONTENTS

ACKNOWLEDGEMENTS

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INTRODUCTION

In the last 25 years, childhood obesity rates in London and New York , two world cities that command global attention, have more than doubled.[1,2] This rise in childhood obesity now threatens the well-being of current and future residents, widens socioeconomic and racial/ethnic inequities in health, and inflicts a growing economic burden on each city. Each city has initiated determined responses designed to reduce obesity, policies and programs that reflect the governance structures and political climates of each city. Yet most observers agree that these responses are unlikely by themselves to reverse the epidemic, lower its long-term costs or shrink the growing inequities in health that obesity imposes. By describing and comparing the ways that London and New York have responded to childhood obesity and by highlighting their successes and limitations, we hope to inspire leaders in cities around the globe to consider new, more forceful actions to reduce obesity.

Our descriptions and analyses of London and New York's response to childhood obesity grow out of collaboration between London Metropolitan University (London Met) and the City University of New York (CUNY). Both universities are the largest public sector institutions of higher education in the respective cities and they share commitments to educating underserved groups and applying scientific and technical knowledge to solving the problems that big cities face. During 2008 and 2009, we convened a series of meetings with city officials, researchers, health providers and advocates in London and New York to compare the municipal-level responses to childhood obesity in these cities and develop recommendations for stronger and more effective action to reduce childhood obesity in world cities. Through our links with mayors' offices, public health agencies, service providers and non-governmental organizations, we hope to catalyze action across sectors to reduce childhood obesity. We also expect

to gain insights that will help each city to better assist its diverse communities to meet the unique needs of its residents and to reduce the suffering that obesity imposes. This report summarizes our findings. In the future, we hope to add other cities to our collaborative and learn from them and to take on other complex health and social problems.

Recently several organizations, including the US Centers for Disease Control and Prevention[3] , the National Institute of Medicine[4] and the UK government[5] have released reports on obesity. Our approach builds on and differs from these in several ways. First, our focus is on the role of municipal government. While we acknowledge that many organizations and all levels of government need to act to reduce childhood obesity, we believe that city governments are ideally situated to take the lead in implementing comprehensive, multisectoral and pragmatic approaches to reducing childhood obesity in those areas where it is most prevalent. Second, we are especially concerned about the role of childhood obesity in worsening present and future health inequalities. Reducing obesity is a human rights and social justice priority as well as a public health and economic problem. Because childhood obesity is a condition increasingly associated with poverty, fundamental solutions require reducing the inequalities that contribute to obesity. Within wealthy countries like the US and England patterns of income inequality mirror those of obesity.[6] Third, we believe that London and New York are in the forefront of cities tackling childhood obesity, making an analysis of their accomplishments and limitations a valuable exercise for other cities. Even approaches that have not yet been fully evaluated deserve scrutiny given the high costs of inaction. Fourth, London and New York have tried both universal (e.g., calorie posting in chain restaurants) and targeted (special projects in high obesity neighborhoods) approaches to reducing obesity, making an analysis of these experiences a useful lesson for those seeking a balanced portfolio of obesity reduction strategies.

Finally, as an independent research collaborative, we seek to articulate a vision and strategies for reducing childhood obesity that are feasible but can transcend the political limitations that city governments often face. While our collaborative has consulted with elected officials and public health authorities in both cities, our recommendations are our own.

In the following sections we provide short descriptions of each city and its childhood obesity epidemic, describe and compare responses to each, review the evidence for municipal responses, and conclude with an agenda for action.

COMPARING CITIES AND EPIDEMICS

New York City and London share social and political characteristics. As the following table illustrates, both cities have large and diverse populations. Because London is geographically larger, it is less densely populated than New York. New York has greater extremes of inequality and is more segregated by race/ ethnicity and class than London. Both cities have the highest rates of income inequality in their nations.

Table 1. Demographic Snapshot of London and New York

	LONDON	NEW YORK
Area	607 square miles (1,570 square kilometers)	322 square miles (834 square kilometers)
Average population density	10,500 people per square mile (4,800 people per square kilometer)[a]	25,621 people per square mile (9892 people per square kilometer) [b]
Total Population	7, 560,000[c]	8,250,000[d]
Race/ Ethnicity[d,e]	White 68% Black 14% Asian 14% Chinese 1% Mixed 3%	White 44.9% Hispanic or Latino 27.4%[a] Black 25.7% Asian 11.8% Mixed race 1.9%
Foreign born	32%	36.7%
Poverty[b]	22%	18.9%
Unemployment	8.%[a]	9.6%[f]
Age distribution	19% under the age of 15[g]	22.9% under age of 17[h]

Sources:

a. In the US census Hispanic or Latino is an ethnic not racial designation thus percentages do not add to 100.
http://www.statistics.gov.uk/focuson/london/

b. Poverty is defined differently in the US and UK. In the UK the poverty line is set at 60% of median income after housing costs. In the US poverty is measured using an annual income threshold set by the US Census. The current threshold for an individual is $10,830 (£6534) and for a family of four is $22,050 (£13,304). http://www.nyc.gov/html/dcp/pdf/neighbor/neighbor.pdf

c. Greater London Authority Data Management and Analysis Group, Update October 2008

d. U.S Census Bureau-American Community Survey 2005-2007, 3 year estimates

e. www.london.gov.uk/gla/publications/.../dmag-update-2008-03.rtf

f. http://www.labor.state.ny.us/pressreleases/2009/August20_2009.htm

g. http://www.statistics.gov.uk/census2001/pyramids/pages/h.asp

h. http://www.baruch.cuny.edu/nycdata/chapter01_files/sheet006.htm

Table 2. Overview of Childhood Obesity in London and New York

New York	London
Prevalence In both cities by the end of primary school, about 1 in 5 children are obese. Childhood obesity in both cities exceeds national averages.	
In New York City nearly 40% of public school children in grades K-8 are overweight or obese. Specifically, 21% of young people are obese and 18% are overweight.[a]	In London nearly 22.9% of children entering school are overweight or obese. Specifically, 10.9% are obese and 12% are overweight. By year-six this increases to 36.3%, with 21.6% being obese and 14.7% overweight.[b]
Race and ethnicity	
Among Hispanic children in New York City, 19% of boys and 23% of girls are designated as obese. Among Black children, 21% of boys and girls are obese. Among Whites, 20% of boys and 14% of girls are obese. Among Asians, 18% of boys and 9% of girls are obese.[a] Among teens, one in three teens living in the poor neighborhoods of Bedford-Stuyvesant, Bushwick, the South Bronx, and East and Central Harlem are overweight or obese compared to one in four for the rest of the city.[c]	Black African, Caribbean and other Black children aged 10-11 in London have obesity rates higher than 25%. Bangladeshi and Pakistani children have rates of 22%. White Irish and British children have rates of less than 20%.[b]
Gender In both cities, childhood obesity rates are higher among boys than girls. This gender ratio changes after puberty.	
Between kindergarten and eighth-grade 24% of New York's boys are obese as compared to 19% of girls.[a]	At year six, 23.6% of boys in London are obese as compared to 19.4% of girls.[b]

Sources:

a. New York City Department of Health and Mental Hygiene and the New York City Department of Education. Childhood obesity is a serious concern in New York City: Higher levels of fitness associated with better academic performance. Vital Signs [Internet]. 2009 Jun [cited 2009 Aug 10]; 8:1. Available from: http://www.nyc.gov/html/doh/downloads/pdf/survey/survey-2009fitnessgram.pdf

b. London Health Observatory. Weighty matters: The London findings of the National Child Measurement Programme 2006-2008 [Internet]. London: 2009 [citied 2009 Jul 1]. Available from: http://www.lho.org.uk/Download/Public/14781/1/Weighty%20Matters%20final.pdf

c. Noyes P, Alberti P, Ghai N. Health behaviors among youth in East and Central Harlem, Bedford Stuyvesant and Bushwick, and the South Bronx [Internet]. New York: New York City Department of Health and Mental Hygiene; 2008 [cited 2009 Jul 1]. Available from: www.nyc.gov/html/doh downloads/pdf/report/yrbs_report042008.pdf

SOCIAL AND ECONOMIC DIMENSIONS OF CHILDHOOD OBESITY

Researchers have shown that poor children are more likely to be obese than better off children. Figure 1 shows some of the pathways by which poverty contributes to obesity. While the role of these factors differs in London and New York, in both cities, compared to better-off children, poor children are more likely to live in neighborhoods that contribute to obesity.

Figure 1. Poverty as pathway to obesity

Food	Poor neighborhoods have more fast food outlets and fewer supermarkets or other retail outlets that sell fruits and vegetables; Unhealthy food advertising targets the poor; Those with low-incomes purchase calorie dense, nutrient poor foods because they are cheaper than healthier products; Public food programs often serve unhealthy or low quality food
Physical activity	Poor neighborhoods have fewer parks and recreation centers; Fears of crime prevent low-income people from going out to be active; Heavy traffic and highways in poor neighborhoods discourage walking or bicycling; Parks in poor neighborhoods are less well maintained and may have fewer attractive amenities
Health care	Health care providers provide less counseling and health education to poor children; Poor children (in US) are more likely to be uninsured or lack access to health care
Schooling	Schools serving poor children often offer less healthy school food ; Fewer opportunities for sports and recreation and less nutrition and health education in schools in poor areas
Other	Stressful living associated with poverty can lead to over-eating; Poor children watch more television, itself associated with more exposure to unhealthy food advertising and with higher rates of inactivity

Sources:[7,8,9,10]

In the US the obesity epidemic is estimated to cost $147 billion a year (£738 million*) in direct and indirect costs.[11] In New York State, adult obesity accounts for $6.1 billion (£3.73 billion) in direct and indirect costs and childhood obesity accounts for $242 million (£147.7 million) in medical costs.[12] Moreover, compared to children of normal weight, obese children are much more likely to become obese adults. A growing body of evidence shows that childhood obesity is an important contributor to several chronic conditions—heart disease, diabetes, and hypertension.[13] Childhood obesity also contributes to lifetime mental health problems.[14] These consequences impose a growing burden on overweight children and adults and on health care systems. People who are obese use nearly twice as many prescription drugs as those of normal weight and have 25% to 38% more doctors' visits.[15] Obesity accounts for 9,000 premature deaths a year in England. It has been projected that by 2050 more than 50% of the population could be obese. Nationally elevated BMI accounts for £4.2 billion ($8.32 billion) in health care costs (2007) and £15.8 billion ($31.3 billion) in losses to the wider economy. Obesity reduces the life expectancy of individuals and is projected to reduce the average life expectancy of Americans by as much as 5 years in coming decades, reversing more than a century of public health progress.

Childhood obesity also imposes social costs—an increasing burden of chronic diseases, widening disparities in health status between the poor and the better off, and a diversion of public resources that could be used to address other pressing problems such as inadequate housing and education or environmental pollution.

The childhood obesity epidemic also places social burdens on overweight young people, their communities and cities. The stigma associated with being overweight has negative emotional and economic consequences that may reinforce and feed into obesity's social inequalities. For example, US women who are overweight in adolescence have 22% lower earnings as adults compared to

*All US currency($) converted to pounds sterling(£) and £ to $ using exchange rate at mid-point of year of estimate

their normal weight counterparts. Young people who are obese have lower self-esteem, are more likely to be depressed, have more negative body image, and are more likely to have poor academic outcomes.[16]

GOVERNMENT IN LONDON AND NEW YORK

While many institutions need to act to reverse increases in child obesity rates, city governments are uniquely positioned to contribute to bringing obesity under control. All levels of municipal governments (e.g., boroughs, community districts, mayors) have responsibilities, assets, and connections to families and communities that enable them to take on obesity. Unlike higher levels of government, they interact with people every day in multiple settings. And, unlike communities, they have authority and financial resources to launch initiatives of the scope needed to change aspects of the environment and culture that shape obesity risk. City governments can also urge regional and national governments to act. Cities can't reverse obesity on their own but they are well situated to take leadership. While London and New York are big, diverse and wealthy cities, they differ in the structures of their municipal, regional and national governments that shape their opportunities to exercise leadership.

In the next section, we briefly describe the governmental structure in each city, then compare their potential and limitations in controlling childhood obesity.

London

The Greater London Authority (GLA) is the regional authority for London. It includes the mayor and the 25 members of the London Assembly, all of whom are elected every four years. The mayor is the elected voice of London and sets out and coordinates strategies aimed at improving London and articulating a vision for the city. The principal strategies cover such issues as spatial and economic development, transportation, environment and sustainability and culture. The mayor's health policy team works to ensure that actions across these sectors promote rather than harm public health in London. In England, regional municipal authorities such as the GLA provide policing, fire and emergency services. In 2000, the mayor of London created the London Health Commission to improve the health and well-being of Londoners. Through its reports and partnerships, this Commission has played an important role in calling attention to the problem of childhood obesity.

Since 2007, central government accorded the mayor a statutory duty to reduce inequalities in health.[17] The GLA has the power to order health impact assessments for any policy including those for transportation or the built environment, a potential tool for the control of childhood obesity. While the position of the mayor in London is much less powerful than in New York, the previous and current Mayors have used the office to advance health-related initiatives. For instance, Mayor Ken Livingstone instigated a successful bid to host the

2012 Olympics, which is intended to leave a "health legacy" by investing £7.5 million ($12.34 million) in sports facilities with the goal of improving opportunities for physical activity for all Londoners. Current Mayor Boris Johnson has appointed a high profile food adviser to oversee the implementation of the London Food Strategy.[18]

Most day-to-day public services in London such as education, housing, social services, street cleaning, waste disposal, roads, local planning and many arts and leisure services are delivered by the City of London Corporation and 32 boroughs, geographic areas that include about 200,000 to 250,000 people. Assigning responsibilities for these services to boroughs enables local authorities to tailor them to meet specific needs but makes citywide initiatives more difficult. At the national level, the United Kingdom has responsibility for setting policies for England but has devolved authority for some functions to the governments of Scotland, Northern Ireland and Wales.

Health services are provided by the national government, which operates the National Health Service (NHS), the government body that funds guaranteed health care to all UK residents. Primary Care Trusts (PCTs) have been developed to commission and fund a range of community and primary health services, hospital care and medical prescriptions. In London, 31 local PCTs oversee public health and medical care. These trusts employ more than 200,000 people and their annual budget is about £12 billion ($23.6 billion). PCTs play an active role in responding to obesity by, for example, funding staff to work to improve school food and conducting studies of the prevalence of childhood obesity in London boroughs. The London Regional Public Health Group (LRPHG) is the local body of the National Department of Health and works with PCTs, the GLA, and local authorities to coordinate local action in response to national priorities. For example, LRGHG program managers work with local authorities to address childhood obesity as part of their Healthy Schools initiative.

The NHS is currently undergoing a controversial transformation that devolves authority to more local levels. As in the case of schools, primary care practices may be able to provide more locally sensitive services, but citywide initiatives become more difficult. In London, city government has little direct responsibility for health care or public health.

New York

New York City has a government structure with a strong mayor and a relatively weak legislative body, the City Council, whose members represent 51 neighborhood districts. Most municipal services are delivered by city agencies run by the mayor. Community districts have an appointed board with limited power to coordinate services at the local level and to provide feedback to elected officials. Unlike some other big US cities and unlike London, New York plays a strong role in delivering many services. It operates the public school and hospital systems, and plays a role in transportation policy and zoning rules.

Many public services require cooperation between the three levels of city, state and national government. For example, the city Department of Education purchases food, plans menus and delivers food to the schools, where local staff actually prepare and serve the food. Through its education department, New York State monitors local school food programs and provides technical assistance to local school food programs. The federal government sets standards, specifies products and pays for some food served in school lunch programs. Improving school food requires either changing policies at all three levels or accepting the constraints imposed by higher levels.

In the US, each level of government and the private sector have responsibilities for paying for and delivering health care and assuring public health. The city government has responsibilities for public health and operates a municipal hospital system. Through the State and federal governments, the Medicaid programs pays for health care for low-income people. Current debates about national health reform in the US are unlikely to change this dispersion of responsibility for health care.

In New York, the city's Health Code gives government a unique tool to advance public health without undue political interference. Under the city charter, the Board of Health may enact, alter, amend, or repeal any part of the Sanitary Code and "may therein publish additional provisions for the security of life and health for the city and confer additional powers on the department not inconsistent with the constitution or laws of the State or with this charter". The Health Code, created in 1866 and modified periodically since, was intended to provide public health experts with an opportunity to set health regulations without going through the legislative process. In the last few years, the Board of Health, an independent body appointed by the Health Commissioner and the Mayor, has used its authority to address the issue of obesity. Since 2006, the Board of Health has issued rules requiring chain restaurants to post the calorie content of the foods they sell (2007), [19] child care centers to offer healthier food and more opportunities for physical activity (2007), [20, 21, 22] and restaurants to eliminate transfat from their products (2006).[23] In these and other cases, the city was able to use its authority to make healthier food and activity choices more available. In London, local government has no such authority.

Common Challenges

London and New York have diverse populations that require obesity control interventions to be tailored to meet the specific needs of groups with different cultures, languages and behavior patterns. Both cities also have vulnerable and mobile populations: recent immigrants, children living in poverty, children who are already obese and homeless or precariously housed individuals and families. These characteristics preclude "one-size-fits-all" or static interventions, and require municipal governments to develop flexible and dynamic approaches, often a challenge to established bureaucracies.

In both London and New York, interactions with other levels of government influence the outcome of policy initiatives. On the one hand, for example, UK national statements on obesity and health inequalities have served as powerful levers for local policy change. On the other hand, since the national government and local boroughs control many aspects of urban life that influence obesity, the

GLA has limited authority to influence the drivers of obesity. In New York, the state government has powerful control over health and social services, sometimes blocking the city from acting on its own. A historic tension between city and state government contributes to conflicts over power and turf that can delay or undermine reform. Gerald Frug, of Harvard Law School, has observed that New York State has given New York City a heart but no brain while Parliament has given London a brain but no muscle.[24] Frug has also observed that building a city based on concern for social justice "takes a back seat to building a globalized business environment," [25] an observation that could also apply to London and New York.

Both London and New York have adopted environmental sustainability as a lead value in their future planning. In 2007, New York's Mayor Bloomberg announced PlaNYC 2030, a planning agenda to address New York's growing population, aging infrastructure, and connections to global warming.[26] While PlaNYC does not provide comprehensive recommendations for food or public health, it includes sections on land, water, transportation, energy, air, and climate change. By contrast, London's Sustainable World City strategy (2002), placed healthy school food at the center of a vision for making London the first sustainable world city.[27] In following the United Nations (UN) definition of sustainable development, the London strategy combines social and environmental sustainability. Given the connections between rising rates of obesity and human induced climate change,[28] both cities can benefit from the development of synergistic strategies to address these global problems.

In both cities, private interests such as the financial sector, food services and real estate developers generally speak with a more unified voice than government or advocacy groups. When public interest and private interest groups differ about policy that affects obesity (e.g., more public oversight of the food and advertising industries, zoning changes to limit density of fast food outlets, reductions in the income equality that drives obesity), private interests generally have more resources and political capital to achieve their policy goals Thus, creating cities where health rather than business concerns take precedence, will require new approaches to governance and democracy and a more level political playing field.

In sum, both cities face a variety of factors that facilitate and block changes that could reduce rates of childhood obesity. The table below summarizes some of these factors. In each city, advocates for reducing rates of obesity will need to find new ways to capitalize on facilitating factors and overcome obstacles.

Factors facilitating and blocking municipal action to reduce childhood obesity		
	London	**New York City**
Factors facilitating municipal action	• Strong municipal control of transportation system • Explicit commitment to reducing inequities in health • National health care system that provides coverage to all • Relatively stable national funding for health care and education • Some business support for healthier eating options • National Child Measurement Program and Healthy Weight, Healthy Lives childhood obesity targets and program funding • Stated commitment to social determinants of health approach by Mayor and Regional Director of Public Health • London Health Observatory, an independent monitor of health trends • Olympics and commitment to health legacy	• Strong mayor who supports vigorous municipal public health role • Strong health department with forceful leadership that supports vigorous role for public health • Health Code that enables action outside political process • Active and energetic nonprofit sector with interests in a variety of food and obesity issues • Public support for action to reduce obesity • Central school system with decision-making concentrated in Mayor's office • Many public officials with strong positions on obesity, food and health. • City Council President, Mayor, Governor and President who have said health and food are priorities • Economic crisis that provides window of opportunity • Food and retail industries with deep pockets to influence political process and modest incentive to change
Factors blocking municipal action	• Economic crisis that distracts public and policy maker attention • Food and retail industries with deep pockets to influence political process and modest incentive to change • Limited municipal involvement in public health • Decentralized/ borough level authority over food and education • Competing priorities at different levels	• Economic crisis that distracts public and policy maker attention • Complex, often anarchic system of government that makes implementation of change difficult • Federal control of school food policy • Strong commitment to incrementalism • High value on individual responsibility as solution to social problems and corporate and political promotion of these values • Competing priorities at different levels • Food and retail industries with deep pockets to influence political process and modest incentive to change

COMPARING LONDON AND NEW YORK'S RESPONSES

London and New York have used their specific circumstances to launch distinct initiatives to reduce childhood obesity. Here we give a brief overview of the policies and programs each city employs and compare these efforts. We focus on six sectors: food, transportation, green space, planning and housing, schools, and health care and health inequalities.

LONDON

London's response to childhood obesity uses the Mayor's authority over transportation and planning and builds on its decentralized structure to encourage grassroots innovation and community tailored interventions.

The London Healthy Weight, Healthy Lives Task Force is an example of the city drawing on its network of local authorities and community-based groups to develop a regional strategy for addressing childhood obesity. The Task Force convened in 2008 as an action of the Health Inequalities Strategy and as a regional response to national targets set for reducing childhood obesity to 2000 levels by 2020. The London task force set out to map activities with the city that could reduce childhood obesity and to "identify what action would be the

most effective in London, with particular focus on children and young people." The Task Force recommends 12 actions that build on the Mayor's regional authority and support work underway at the community level. These actions are still under consideration and have informed the policy agenda at the end of this report.[29]

Well London is a lottery-funded initiative led by the London Health Commission that draws together city government, academic institutions, civil society groups, and health care providers to support community-led projects in the city's most deprived areas that promote health.[30] These local projects are part of a citywide evaluation. In effect, they turn the challenge of working with Local Authorities into a living laboratory for health promotion. For example, the Eatwell and Buywell projects work to improve the local food environment and eating habits by making quality, affordable, culturally relevant foods more available and celebrating food through cooking clubs. The most effective local projects can inform the city's approach to tailoring initiatives to meet the needs of its diverse populations.[31, 32]

Unlike New York, London is striving to meet the international standards to be designated as a Child Friendly City. Building on the UN Convention on the Rights of the Child, London's City Hall has a child and young people's unit that facilitates young people's participation in city governance.[33] The child and young people's unit has taken an active stance toward ensuring free access to public transportation and play.

Food

After extensive public consultation, the London Food Strategy (LFS) was launched in 2006 outlining a 'farm to fork' vision for the city's food system and adopting a responsible procurement plan for agencies under the Mayor's authority.[18] The plan emphasizes local foods, improving conditions for the food workforce, celebrating diverse food cultures, reducing the city's ecological footprint, and promoting health. The current Mayor has appointed a food policy coordinator to oversee the implementation of the LFS. The Mayor's health policy team has worked to coordinate local actions into an informed regional response.

Transportation

In transportation and physical activity, London government appears to have more authority than New York's to set transportation policy and to consider the environmental and social consequences of their decisions. For example, London's congestion pricing plan raised £137 million ($270 million) in the last year that will be used exclusively to improve public transportation and to increase bus ridership and the number of bicycle journeys through the zone, while reducing air pollution.[34] Transport for London (TfL) uses a range of strategies to promote active travel as a healthy and environmentally sustainable way to move throughout the city. Examples include supporting

employers' development of workplace travel plans and partnering with PCTs to deliver programs that support adults in transitioning to walking and biking rather than driving.[35]

TfL promotes young people's active travel to school through a 'Walk on Wednesdays'[36] campaign and a Junior Road Safety Officer[37] scheme that engages young people and teachers in teaching children about street safety and encouraging them to walk and bike more. Activate London uses community mapping and participatory design to improve the physical environment and make activity more accessible.[38]

Green space

London has a citywide urban agriculture scheme called Capital Growth that aims to create 2,012 new food growing spaces in London by the year 2012. By getting Londoners to grow more of their own food, the Mayor hopes to make fresh and culturally relevant produce more accessible. The program uses the city's abundant green spaces by matching partners who have space for growing food with people who would like to garden but lack access to green space, promotes school gardening projects, and supports the reclamation of derelict lands and the development of roof top food producing gardens[39]. In addition to supporting local culturally tailored food production these projects can also serve as sites for education on cooking and nutrition.[29]

Planning and housing

Since 2006 all boroughs of London are required to have a Children and Young People's Plan that includes play in their open space planning strategies. These plans are required to be developed in consultation with children and youth. They also must assess the current play facilities and develop plans that meet citywide standards for quality, quantity, and accessibility. A typology of play spaces ensures that there are appropriate play spaces for children and youth of different stages in development. The planning guidance on play also requires all new housing developments to include spaces for young people to play.[40]

Schools

National standards for school foods in the England shifted in 2006 to further restrict candy, sodas, and fried foods while requiring two portions of fruits and vegetables at every meal. In 2008 and 2009 nutrient based standards came into play to further improve the health promoting capacity of school meals. Still, because schools and their meal provision are run at the level of London's 32 local councils there is considerable variation in how, and to what extent, these standards are met.[41] There are no nutrition standards for foods served in day care centers. This diffusion of authority presents both an obstacle to citywide procurement and meal planning and an opportunity for innovation at the local scale. For example, in early 2009 the London borough of Islington passed a budget resolution that includes funding to provide free school lunches. In doing so, Islington is the first local authority in England to pass such a measure. The meal program

will cost £2.9 million ($4.77 million) over two years and serve 12,000 children ages 11 and younger attending 45 schools. Other school initiatives, some mentioned previously, focus on increasing opportunities for physical activity.

Health inequalities

London is the first world city to develop and employ an integrated citywide policy strategy that focuses on reducing inequalities in health. Based on the World Health Organization's Commission of Social Determinants of Health, [42] London's strategy aims to reduce inequalities in health by changing the social conditions that impede people from leading healthy lives while also emphasizing empowerment. The London Health Observatory monitors health and health care at the city level, in the context of its responsibility to track inequalities in health in the UK. New York has no comparable counterpart. The London Health Commission also tracks progress in reducing health inequalities.

NEW YORK

New York's response to childhood obesity exercises the strong authority of the city health code while also encouraging collaboration across departments of health, transportation, buildings, education, and planning. For example, the Office of School Health bridges the city's departments of health and education. Food Retail Expansion to Support Health (FRESH)[43] is another example of such collaboration, this time between the Departments of Health and Mental Hygiene and City Planning.

Food

Through a suite of policy changes and programs, New York is making fresh nutritious food more accessible, especially for its poorest residents. Conceptually, New York has shifted its focus on food from policies that view food safety as protection against food-borne contaminants to one that also addresses chronic health conditions such as obesity and diabetes.[44] The Health Code, the mayor's authority over municipal contracts, and a range of incentives for businesses and individuals are all tools used to accomplish these changes. In early 2007, the Mayor and the City Council created the Office of the Food Policy Coordinator, who was charged with promoting access to affordable, healthy food for low-income New Yorkers.[45] This office has coordinated several subsequent policy initiatives. The City Council Speaker, Christine Quinn, recently announced several new food policy initiatives, providing further legislative support for change.

In 2008, Mayor Michael Bloomberg announced an executive order setting nutritional standards for all food purchased or served by city agencies. The standards will improve the nutritional quality of more than 225 million meals served a year in city schools, jails, hospitals, and senior care centers. They ensure that the food served or sold in municipal agencies does not exceed specified proportions of fat, sugar and salt.[46] Other efforts to reduce the promotion and availability of unhealthy food include a 2009 advertising campaign that urges subway and bus riders, "Don't drink yourself fat. Cut back on soda and other sugary beverages. Go with water, seltzer or low-fat milk instead."[47] Also, in an effort to reduce consumption of soda, several legislators have urged passage of a tax on sweetened beverages, so far unsuccessfully.[48] In addition, a number of initiatives focus in increasing the availability of healthy foods in poor areas. Through the Healthy Bodega[49] Initiative the Department of Health staff works with owners of small corner stores to improve the quantity, quality, and display of fresh foods while reducing promotion of alcohol and tobacco. The city has also issued 1,000 new licenses for Green Carts[50] street vendors who sell fresh produce in areas where access is limited.

In addition to increasing the number of farmer's markets in poor areas, the city is working to ensure that vendors at these markets are equipped to accept electronic food stamp payments and initiated Health Bucks, a program that provides incentives for food stamp recipients to purchase produce at these markets by giving them $2 bonuses for every $5 spent.[51] Unlike London, New York initiatives like these have made farmer's markets and local foods accessible and viable in poor communities.

In 2009, New York City presented its plan for promoting supermarket development in areas with high rates of diet-related disease and limited food retail. FRESH supports zoning changes that give developers the right to build larger buildings in exchange for including a grocery store on the ground level, reduces requirements to provide parking, and eliminates land use restrictions on locating supermarkets in light manufacturing areas. Financial incentives include real estate tax reduction, sales tax exemption, and mortgage recording tax deferral.[43] To qualify for these incentives, supermarkets must dedicate at least 30% of their retail space to perishable goods and meet minimum requirements on square footage devoted to fresh produce. The city estimates that the program will help create 15 new grocery stores. Food worker unions and labor advocates are urging the city to attach good job standards to the requirements for receiving financial incentives.

Transportation

While London introduced a congestion charge, the New York State Legislature rejected the city's congestion pricing plan in 2008, a proposal that was based in part on London's successful policy. However, under new leadership in the Department of Transportation, the city has met a Mayoral target of creating more than 200 miles in bicycle lanes and passed new zoning regulations requiring bicycle parking space in new residential construction. New York's Safe Routes to School[52] program conducted an accident analysis for all city schools and identified 135 priority schools where it has made safety promoting improvements to the streetscape around schools. In addition it has prepared school safety maps for all primary and secondary schools with more than 250 pupils.

Green space

The Mayor's 2030 plan includes a number of initiatives for increasing access to parks and recreational spaces. For example, it has begun work on opening schoolyards as neighborhood play spaces, adding lighting to athletic fields so that they can be more fully utilized, and converting asphalt sites into turf playing fields.[26]

Planning and housing

The New York City Departments of Health and Mental Hygiene, Design and Construction, Transportation, and Planning collaborated to produce New York City's Active Design Guidelines.[53] Released in 2009, the guidelines provide planners and architects with a manual of strategies for promoting physical activity through the design of neighborhoods, streets, buildings, and work places.

Schools

Through the city Health Code, the Department of Education and the Office of School Health, New York has taken a number of steps toward improving the health promoting capacities of its public schools and day care centers. It has invested more than $1 million (£544,590) in equipment for physical education and implemented a citywide physical education curriculum. Students' weight and fitness are monitored and reported to their parents using a 'fitnessgram'. This monitoring is also used to track childhood obesity throughout the city.[54]

Starting in 2003, New York has made several important improvements to the food served in its public schools. In New York City, all students are eligible for free breakfasts. Recently the city piloted a program serving breakfast in classrooms. Its goals are to reduce the stigma associated with receiving free meals in school, reduce tardiness as more students arrive at school on time, and increase the number of students eating these school meals.[55] Soda has been removed from vending machines and replaced with water and 100% fruit juice. To reduce the fat content of food served in schools only skim and 1% percent milk are available and french fries are now baked. Fresh fruits and vegetables are on the menu everyday and some high schools now have salad bars. Despite these important policy changes, many New York students report erratic implementation of these changes and many still complain of limited choices and unappealing presentation of food.

Using the city Health Code, new regulations have been put in place that improve nutrition and mandate physical activity for children aged 2-5 attending non-residential group day care. The new laws ban drinks with added sweeteners, limit servings of fruit juice, and require that all milk served be reduced fat. Television and video viewing are not allowed for children less than two years old and are limited to 60 minutes a day for those who are older. Physical activity is required everyday for an hour and

half of this must be structured and guided. Lastly, when weather prevents outdoor play, the law now requires that indoor activities be substituted. To support the implementation of such sweeping changes the city has offered training to teachers and day care inspectors.[20-22]

Health inequalities

New York addresses health inequality through the work of the District Public Health Offices (DPHOs) and partnerships with community-based groups and coalitions. DPHOs are located in the South Bronx, North and Central Brooklyn, and East and Central Harlem, three of the poorest city neighborhoods, and deliver resources and programs to these high need areas. New York is also one of nine cities in the US funded by the WK Kellogg Foundation to take action to reduce disparities in childhood obesity. The New York City Food and Fitness Partnership brings together more than 100 community-based organizations, non-profits, and academic institutions to develop action plans and policy agendas to reduce obesity.[56] In addition, the U.S. Centers for Disease Control and Prevention has supported the Strategic Alliance for Health to build an alliance to reduce the burden of chronic disease in East and Central Harlem and the South Bronx.

REVIEWING THE EVIDENCE

Although there is no proven cure for childhood obesity, strong evidence supports the value of prevention and a growing body of evidence supports the use of environmental approaches for promoting healthy eating and physical activity. In this section we distill these bodies of research to highlight the findings and messages that we believe mayors, city officials, and advocates will find most useful. First, we describe three broad principles that emerge from our review of the evidence– put prevention first, engage whole communities and change policies to support changes in behavior that make healthy behavior the norm. We then summarize the results of research and intervention studies in five domains: the built environment, physical activity and travel, food, primary health care and monitoring and evaluation.

INTERVENTION PRINCIPLES

Put prevention first

Many strategies in multiple sectors will be required to reverse rates of childhood obesity. A starting principle is the value of making prevention, rather than treatment, the intervention priority. Several types of evidence support this approach.

First, according to a recent review, children who are obese are 2 to 10 times more likely to become obese adults.[57] Once young people develop behaviors that lead to weight gain these habits will be difficult to change. Supporting young peoples' development of healthy lifestyles saves them and society the effort and cost associated with trying to lose weight. In addition, prevention can save young people from the distress that obesity imposes by lowering self-esteem and contributing to social isolation.[58] Second, many of the actions necessary to prevent childhood obesity – building activity and healthy eating back into our neighborhoods and lives- will have broad benefits beyond addressing this one public health issue. For example, making walking and bicycling easier can help to reduce future adult rates of diabetes, heart disease, and depression. Third, as we have seen, obesity imposes high costs on city government and society as a whole. Averting these costs will free resources that can be used to address other pressing social problems.

Engage whole communities

New evidence shows that it is possible to reverse trends in obesity at the population level if whole communities are involved for the long-term. These results come from a 12-year study conducted in France that compared obesity rates between a town that implemented a whole community approach and one that took no coordinated action.[59] Over 12 years the town using the whole community approach had significantly lower childhood obesity rates than the control town and lower rates than at the start of the study. Key elements of this approach included school-based interventions, parent and community engagement, municipal support for environmental changes such as building new sports facilities, and communication about these efforts through mass media. School-based interventions promoted healthy eating by improving children's nutritional knowledge and the quality and affordability of food in schools. Similarly, physical activity was promoted by organizing walk-to-school days, improving facilities and hiring sports educators. Parents were invited to family breakfast in schools while doctors, shopkeepers, sports and cultural groups organized family events focused on healthy lifestyles. Based on a school wide survey that reported high levels of unhealthy eating and sedentary behaviors, doctors and dieticians provided tailored advice to families. Newspaper, radio, and television coverage of these events also supported the project. Although somewhat more modest, a similar community-wide intervention in Somerville, Massachusetts also demonstrated success in reducing BMIs in children in the participating community in comparison to those in two similar areas without such a program.[60]

Although London and New York are very different than these small towns, there are some important lessons to be learned from such examples. By combining environmental changes with education and targeted intervention, these towns were able to reduce childhood obesity. There is no magic bullet but local governments can provide support and leadership for communities to create a sustained shift in social norms and health outcomes. Bringing interventions like these to scale in London, New York and other big cities will require forceful leadership at the municipal and community levels, new resources and mobilized communities.

On a different front, public health practice in many settings demonstrates the value of engaging key stakeholders in all aspects of planning, implementing and evaluating change. Young people, parents, community leaders and businesses can play a role in reducing obesity but advocates and policymakers need to make more consistent efforts to bring these constituencies to the table.

Change policies to change behaviors

A third principle for interventions to reduce childhood obesity is the importance of changing the policies that encourage or discourage healthier behavior. A growing body of evidence shows that policies that create food and physical activity environments in which healthy choices are easier and more affordable than unhealthy ones can play an important role in reducing obesity.[61-68] These include both policies that encourage access to healthy affordable food and safe physical activity and those that discourage the promotion of unhealthy options (e.g., marketing high sugar, high fat food to children).

Policy change is also needed to address current socioeconomic and racial/ethnic inequities in the burden of childhood obesity. Individual and market- based solutions to obesity (e.g., membership in a fitness center or nutrition counseling by health providers) will always benefit most those with more income and education, thus widening disparities.[69] Only policy changes that modify the social conditions that create the inequities in obesity (See Figure 1) can fundamentally alter these dynamics.

In some cases, the difficulty of evaluating the impact of policy change has left a less solid evidence base for policy than individual-level interventions. Thus, municipal governments are ideally situated to join researchers to fill this gap in the literature. However, to delay considering policy changes for which the weight of the evidence suggests efficacy until definitive proof is demonstrated will doom many children and communities to continue to suffer from the preventable health problems associated with obesity.

DOMAINS OF INTERVENTION

Built environment

The places where children live, learn and play have a significant impact on their health and environmental interventions are increasingly recognized as efficient ways of increasing physical activity and improving diet. Rebuilding the ties between urban planning and public health can help to create healthier cities for the 21st century. In both behavior and city planning, often the healthy choice is also the green choice.[64-66] Replacing energy generated with fossil fuels with human energy by encouraging walking and bicycling reduces both pollution and obesity. By exploiting this synergy, London and New York can help to reduce two global problems.

Disparities in the availability of resources like safe walkable streets and healthy affordable food contribute to inequalities in health. For example, US studies show that low-income neighborhoods have fewer parks and sport fields when compared to more affluent areas.[67] Research at London Met has shown that even within single neighborhoods "particular groups perceive and experience fear and criminal activity differently" and that efforts to increase access to resources like public transportation and parks must take such differences into consideration.[70] Funding the construction of fitness facilities and food growing gardens without specifically locating these in the communities with the highest levels of obesity may result in widening inequalities in health by increasing disparities in access to these resources. In this and other areas, community participation in planning can help to ensure that resources are spent on projects that people will use and have their intended outcomes. Participation also supports community cohesion and empowerment which are further linked to health and the reduction of health inequalities.

Physical activity and travel

Strong evidence links access to recreational facilities and programs to young people being active.[67] Playgrounds and parks provide important spaces for both relaxation and active recreation. As shown in Figures 2 and 3 below, in both London and New York access to green space is inequitably distributed.

Access and use of parks, playing fields, recreation centers and other facilities varies by gender, socioeconomic status, and age. For girls, levels of physical activity have been linked to how close they live to places where they can be active. Activity levels for boys can be linked to access to parks and neighborhood spaces where they are allowed to play. Very young children are more active when they spend more time outdoors and when they have access to places where vigorous activity is permitted.[67] For example, one US study examining African-American urban adolescents' perceptions of environmental factors related to physical activity found that these factors differ significantly by gender.[71] Many young women saw fear of crime and violence as an obstacle, while young men were more concerned about the opportunities available for physical activities. In designing recreation policies, city officials need to take these gender differences into account. A study examining young Londoners perspectives on environmental influences on physical activity found that the proximity and quality of facilities, youth and parent perceptions of safety, and having fun with friends affect their ability to be active.[72]

FIGURE 2. PLAYGROUND ACCESS BY NEIGHBORHOOD IN NEW YORK CITY

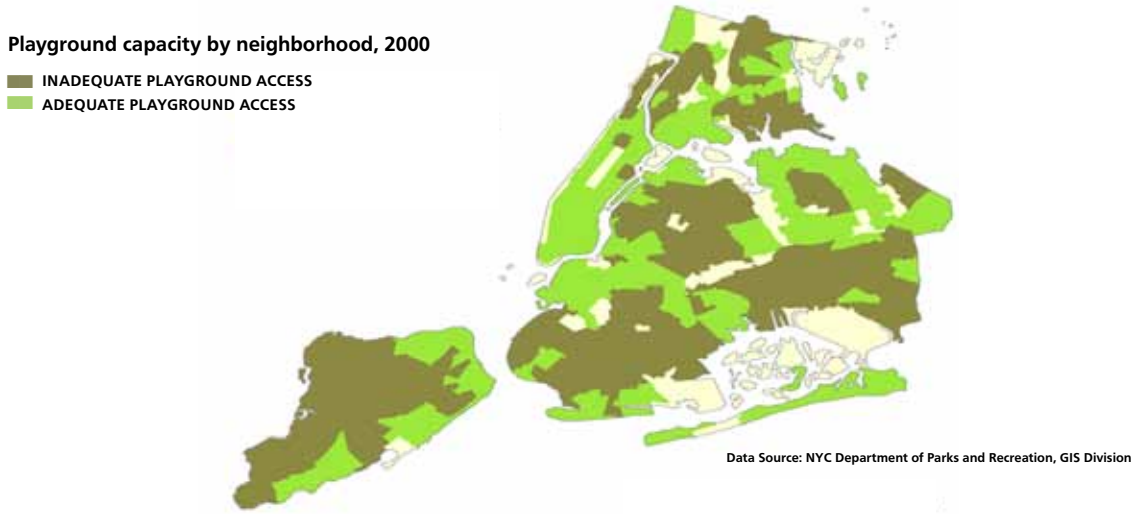
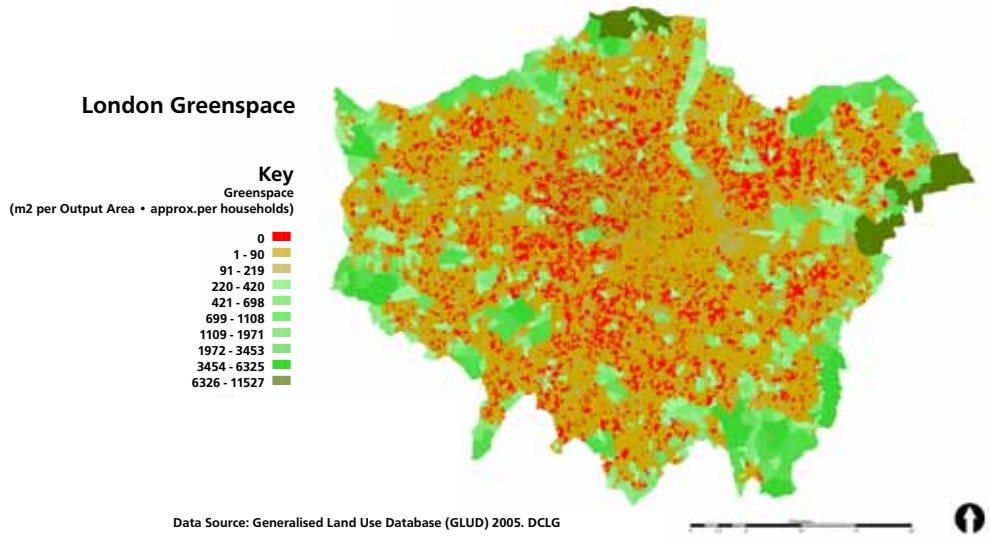


FIGURE 3. GREEN SPACE IN LONDON



Countries with the highest levels of active transportation, such as walking and cycling, have the lowest rates of obesity.[73] European countries have higher levels of active transportation when compared to North America and this may be a factor contributing to Europe's generally lower rates of obesity. For many people, bringing physical activity back into our daily lives is easier than finding time to go to a gym. Even short periods a day of moderately strenuous activity like walking and stair climbing can prevent weight gain.

When people use buses and trains to travel, they usually have to do some walking or cycling to get on and off the public transit grid. Cities like London and New York already benefit from environmental characteristics that promote active travel such as population density, mixed land use, historic structures, high cost and inconvenient car ownership, and well-developed sidewalk and bicycle lane networks. Actions such as increasing bike lane and sidewalk connectivity with public transportation, providing more and more secure bicycle parking, prioritizing pedestrians in traffic regulation and enforcement, neighborhood greening, and increasing the availability of public transportation in areas that have limited access could further increase the use of active travel and reduce obesity. Where these factors combine to create walkable neighborhoods there are significantly lower percentages of people who are overweight.[74]

Children who regularly walk or bike to school are generally more active than those who travel by car.[67] Studies show that the distance between home and school, presence of sidewalks, parental concerns about traffic danger and neighborhood safety, and gender influence the likelihood that children will walk or bike to school. Boys are twice as likely as girls to walk to school.[75] This gender difference highlights the significant impact public safety has on physical activity and obesity for young people. Several municipalities have established "walk to school" programs using "walking school buses" that can supervise young children whose parents are unable to walk them to school.[76]

Food

Today energy dense fast food is less expensive and more available in most city neighborhoods than fresh food. Many parents' concerns about time and cost lead them to purchase, eat, and feed their children more prepared food and fast food, which are often higher in calories and lower in nutrients than fresh food. Increased portion sizes and growth in the percentage of meals eaten outside the home have also been connected to growing rates of obesity.[67] The recent down turn in the global economy and increase in food prices is forcing more people to spend less on food. More people are buying more foods that are cheap, energy dense, and nutrient poor. Left unchecked by government intervention, such trends will only exacerbate health inequalities.[77]

While many environmental strategies for improving diet have not been evaluated in connection with childhood obesity, researchers recommend ensuring that most food available to children meets nutritional guidelines, reducing young people's exposure to advertising for unhealthy foods, and making healthy foods easy to identify and affordable.[67] One British study found that, after watching advertisements for fast food, breakfast cereal and soft drinks, obese children increased their food consumption by 134%, while overweight and normal weight children did so by 101% and 84% respectively.[78]

In London, only 31% of young women and 30% of young men report eating five or more servings of fruits and vegetables a day.[79] In New York only 17.2% of young women and 20.2% of young men report eating five or more servings of fruits and vegetables a day.[80] Food served at institutions that receive support from municipalities, such as schools and recreational facilities, thus presents an opportunity for creating environmental or policy changes that help young people maintain healthy body weight.

Research suggests a number of ways to make the healthy food choice the easy and affordable choice and many of these strategies are cost effective, green, and utilize authority and resources that cities already have. These include increasing the availability of retailers that sell healthy foods, creating more opportunities for people to grow their own food, requiring calorie posting on restaurant menus, and making healthy free food the only food available in schools and other public places. Ensuring that such actions are carried out with a focus on poor and socially excluded communities is essential for reducing inequalities in obesity.

Supermarkets and food retail

Using land use and planning powers to support supermarkets in poor neighborhoods is one way to make healthier food more available and affordable. In the US, poor neighborhoods and communities of color have fewer supermarkets than better-off or white ones, and there are fewer health promoting foods available in these supermarkets. In contrast to studies showing that living near a supermarket reduces risk for obesity, living near convenience stores increases the risk of obesity.[81, 82] The Mayor's food strategy in London identified thirteen wards across three London boroughs as 'food deserts', i.e., areas where there was

limited provision of healthy food.[18] Numerous studies in New York show disparities in food access.[83-85] These studies find that affordable fresh produce is difficult to find in the South Bronx and East and Central Harlem and that poor neighborhoods have more small stores, or bodegas, and fewer supermarkets than wealthier areas.

In England there is mixed evidence supporting links between supermarkets and diet, suggesting that increasing access to supermarkets may not by itself lead to healthier eating.[86, 87] This research suggests that new supermarkets may slightly increase fruit and vegetable consumption for people who switch to shopping at the new store and for those who eat two or fewer servings of fruits and vegetables a day.

Supermarkets also increase competition among food retailers and this can drive down prices. Having lower fruit and vegetable prices in a neighborhood has been associated with lower BMIs among children.[88] In addition to supermarkets, support for food coops, small grocers, farmer's markets and mobile fruit and vegetable vendors can help bring healthy foods into neighborhoods where they are scarce. Some of these strategies, like co-ops and farmer's markets, may have the added advantages of promoting community engagement with the food system and thus enhance residents' knowledge of food and nutrition.

As cities consider subsidizing supermarkets in order to attract them into low-income neighborhoods they should also consider requiring that recipients of public subsidies provide living-wage jobs, increase shelf space dedicated to healthier food, reduce promotion of unhealthy foods, and offer affordable healthy food options. In the UK, some observers fear that the growing concentration of national and global supermarket chain stores may undermine public sector ability to promote healthy food policies.[89]

Urban farms and gardens

Urban farms and gardens can transform abandoned or underused space into productive landscapes where people grow their own fruits and vegetables and beautify their neighborhoods. In addition to making fresh foods more available gardening can positively influence the food preferences of gardeners.[90-92] Children who participate in programs that integrate nutrition curricula and school gardening have shown increased preferences for vegetables and these increases persist for at least six months.[91] Similarly, studies find that people who grow vegetables eat more of them and share them with others in their communities. Gardening can increase the accessibility of foods such as fruits and vegetables that may be prohibitively expensive or culturally specific. Supporting urban food production is also cost effective. Every $1 (£0.61) invested in a garden potentially yields $6 (£3.65) in produce. In Britain, there is a long history of growing food in allotments. These small scale food growing schemes have regained popularity and now most have long waiting lists for gardeners. In the US, historically state support for gardens has been driven by wartime frugality and the need to promote health and values like self-sufficiency and productivity.[93] Today, our financial, environmental and public health crises create an opportunity to draw on similar values while creating green jobs that support local and regional food systems that feed all city residents. Bringing these types of programs to the scale that can have a positive impact on health remains a daunting challenge for local governments and may require additional support from higher levels of government.

Fast food and restaurants

Cities can also exercise their land use and planning authorities to limit the availability of unhealthy foods. Fast food restaurants promote childhood obesity by selling inexpensive and fattening foods and by targeting children with marketing tactics that lead them to develop brand loyalties to fast food chains and to pressure their parents to purchase these foods. These restaurants are local manifestations of a global corporate industrial food complex that relies on agricultural practices that advance environmental degradation, labor practices that deepen inequalities in power and wealth, and aggressively markets products to children that promote obesity. Fast food restaurants cluster around schools and are more prevalent in poor neighborhoods. One recent study finds that children who attend schools near fast food restaurants are more likely to be obese than those whose schools do not have fast food restaurants nearby.[94] In the context of increasing access to healthy foods, limiting the density of fast food restaurants per neighborhood and restricting their proximity to schools may help shift the balance toward healthy food. In 2008, the city of Los Angeles banned new fast food outlets in one area of the city with high obesity rates and set a precedent that other US cities are considering.[95]

Requiring calorie labeling on restaurant menus makes it easier for people to identify which food choice is the healthier choice. Research conducted by the New York City Department of Health demonstrates that when patrons see calorie information they choose to order fewer calories.[96] After calorie posting became mandatory in New York, customer preferences for lower calorie foods has created an incentive for restaurant chains to reduce the caloric content of their products by either reducing portion sizes or reformulating recipes. Thus mandating calorie labeling on menus produces both the primary benefit of enabling people to make healthier choices and the secondary benefit of creating a market-based incentive for restaurants to sell healthier foods. Initial evaluation studies provide mixed evidence of results, suggesting the need for continued studies of various approaches to calorie labeling.[97]

School food and universal free meals

School food has long been an important social policy issues in the US and the England. The school food environment includes more than just meals. It also includes vending machines and practices like using food as a reward and for fundraisers. Even foods sold outside of schools can be considered part of a school's food environment when students are allowed to leave during the day to buy food and when they purchase snacks after school.[98] A growing consensus among food advocates is that providing universal free meals is an effective and efficient way to

ensure that all children have access to nutritious food and to eliminate competitive foods from schools.[99] Free, tasty and healthy school food also reduces children's incentives to purchase unhealthy food outside the school. Numerous political and economic obstacles make free school lunches for all an ambitious goal.

Providing universal free school meals has a positive impact on students' eating habits and behavior. Eat Well Do Well, a 3-year study of a universal free meal trial conducted in Hull England, provided free meals and snacks to students. All meals met nutritional standards and discussion of food and health were integrated into the curriculum. During the trial, fewer students reported skipping breakfast or eating breakfast on the way to school, going to bed hungry, and drinking soda for breakfast. After three years, more students reported: eating school meals, feeling healthy, and making healthier food choices even outside of school. Teachers reported that students had gained nutritional knowledge and were calmer and better behaved. School food personnel reported reductions in the administrative costs associated with collecting lunch money and in the cafeteria trash from packed meals. Principals found that lunch periods ran more efficiently, leaving more time during the day for instruction. Perhaps most importantly, the stigma associated with qualifying for or eating free meals, was removed thus making it possible for more students who rely on such meals to obtain them. Survey results showed that after three years there were fewer differences in the overall diets of students who would be eligible for free meals and those who would not.[100] The impact of this program on obesity was not assessed.

Assessing the impact of healthier and free school food programs on obesity is an important research priority. A number of studies show that changes in school food menus and policies can contribute to reductions in obesity.[101]

Primary health care

The health care setting is another important arena for intervention. Health care providers can promote breastfeeding, an important protection against childhood obesity.[102] New York City has recently developed hospital programs and policies to encourage breast feeding.[103] They can counsel parents about the importance of and strategies for preventing obesity in the preschool years, providing advice on diet, physical activity and television viewing.[104] Health care settings can also serve as sites for more intensive behavioral interventions that in some cases have been demonstrated to lead to reductions in children's BMI.[105, 106]

Monitoring and evaluation

Even though several reports and major reviews conclude that 'upstream', 'whole community', and community-driven approaches to reducing childhood obesity are needed, research that tracks the effectiveness of such efforts is sparse. As major players in the fight against childhood obesity and key consumers of research on this issue, cities have the opportunity and responsibility to monitor trends in obesity and evaluate the effects of policy interventions. A related priority is to develop more research and evaluation studies where children and young people are active participants in shaping the programs and places that aim to support their health and development. Finally, more research is needed on the impact of food advertising and marketing to children and effective strategies to protect children from its adverse effects. Partnerships between academic institutions and city governments can help to fill these gaps in the knowledge needed to reduce childhood obesity.

RECOMMENDATIONS

London and New York are already acting to reduce childhood obesity but reversing these epidemics will require stronger, better coordinated, and more sustainable action. The policy agenda presented here recommends actions that can be enacted at the municipal level, will reduce inequalities and the overall burden of suffering that obesity imposes, are either well supported by research or already practiced in either city, use existing city assets, and are both green and healthy. By moving to implement this agenda, both cities can expand a balanced portfolio of obesity interventions that include both targeted and universal approaches and seek modest and more transformative changes.

Based on these criteria, we selected recommendations suggested by the partners in our collaboration and in recent reports on local government actions to address childhood obesity by the US Centers for Disease Control [1] and Institutes of Medicine[2] and from the work of the London Task Force on Childhood Obesity and the recently circulated draft of the London Health Inequalities Strategy. [29]

The agenda recognizes that city governments play an important role in creating policies and structures that support community action, create incentives for responsible business practices, and deliver essential goods and services. While city government can lead the charge on this agenda, community and user engagement are essential elements of shaping the messages, programs, and policies that will be its tangible results. In particular, more active engagement of parents, young people and community residents can create additional pressure for change. Regional and national governments and businesses must also play a role if municipal changes are to be sustained and brought to scale. The recommendations are listed from the broadest citywide actions to the more community-based. In each city the priorities for action may be different based on political opportunities and constraints. The recommendations are followed by Table 3 that provides an overview of our recommendations by sector and the key actors in each sector.

LAND USE AND PLANNING

1. ***Use zoning authority and land use review processes and other municipal authority to limit access to fast food and the promotion of unhealthy foods to children.***

   In both London and New York zoning to limit access to fast food has been discussed. In New York City, legislation has been proposed that would prevent new fast food restaurants from opening near schools. The London borough of Waltham Forest has developed a supplementary planning document to provide guidance on the permitting for "hot food take aways" that aims to reduce the negative impact of these shops on the local economy, public health, and environment by limiting their density to 5% of all retail units and 'resisting' them near residences or within 400 meters of parks and schools. The ubiquity of fast food outlets in both cities makes a freeze on new establishments only a partial solution but a step in the direction of limiting availability of the most unhealthy products. The combination of improving quality and reducing the cost of school food and restricting the number of outlets selling unhealthy food in the "school fringe" can help to improve children's diet. City governments can use their own powers or urge other levels of government to tax unhealthy products (e.g., sweetened beverages) and launch counter-advertising (e.g., New York's "Don't pour on the fat" campaign) to reduce the availability or attractiveness of unhealthy foods and beverages.

2. Use zoning, tax incentives, and city-owned property to increase the availability of healthy, affordable, and culturally appropriate food in neighborhoods where it is limited.

Recently New York has presented a plan for promoting supermarket development in areas with high rates of diet-related disease and limited food retail. The FRESH plan includes both zoning and financial incentives for supermarkets. Zoning changes give developers the right to build larger building in exchange for including a grocery store on the ground level, reduce requirements to provide parking, and eliminate land use restrictions on locating supermarkets in light manufacturing areas. Similar action could be taken in London. In both cities, these supports should also be extended to food cooperatives, and other community-based food retail outlets. In addition, when cities provide supermarkets with public subsidies, they should expect these stores to expand shelf space for healthier foods, restrict promotion of unhealthy food (especially to children), provide good jobs for their workers, and make healthier food more affordable.

3. Build active design principles into building codes, housing strategies, and neighborhood planning.

Both cities have polices that support new developments that encourage physical activity but these efforts could be expanded based on the experiences of the other city. In addition, devising new ways to retrofit older buildings and streetscapes to encourage physical activity could expand opportunities, especially in older, often poorer neighborhoods. New York's Active Design Guidelines could include more specific guidance on expanding opportunities for children's play and London's Housing Strategy could include more of the active design principles that New York is advancing.

FOOD

4. Set standards for municipal procurement and leverage economies of scale to promote food systems that support economic, environmental, and population health.

By combining the best elements of London's Food Strategy and New York's nutrition standards for municipally procured meals, both cities could further strengthen their roles as the city's prime food purchaser and distributor. By using this role to actively promote healthier food and reduce the promotion of unhealthy foods, city agencies such as schools and preschool and afterschool program could become "healthy food zones" serving the city's poorest children. Just as no smoking zones expand places where the air is clean, these designated areas could serve as growing zones where only healthy food is available.

5. Redefine food safety for the 21st century and retool the food safety workforce.

By using the city health code to address obesity and other diet related chronic diseases, the New York City Department of Health and Mental Hygiene has extended the role of food inspectors beyond the prevention of food-borne disease outbreaks. Although London does not have the same legal powers over food as the New York City Health Code provides, it can still find new ways to retrain and redeploy its food safety staff and systems to directly address obesity and chronic disease.

PARKS, GREEN SPACE, AND PUBLIC RECREATION

6. Promote and support urban agriculture as a sustainable and health promoting use of green space.

By encouraging Londoners to grow more of their own food, Capital Growth hopes to make fresh and culturally relevant produce more accessible. The program helps match partners who have space for growing food with people who would like to garden but have no access to green space, promotes school gardening projects, and supports the reclamation of derelict lands, and development of roof top food producing gardens. New York has a strong network of community gardens and urban farms as well as thousands of acres of underutilized open space that could be expanded through a similar program.

7. Increase access to places where people can be physically active.

Both cities have publicly funded pools and active recreation facilities where access could be expanded by reducing or eliminating usage fees and by extending their open hours and seasons. In addition, by opening schools and school yards to the community in the evening and on weekends and during the summer, residents would have more places for sports and other physical activity.

TRANSPORTATION

8. Promote walking and cycling, especially in neighborhoods with high levels of childhood and adult obesity.

Both cities have taken significant steps to expand active travel infrastructures. Furthering these efforts could entail added focus on expanding this infrastructure with community guidance in neighborhoods with high levels of childhood and adult obesity. Borrowing from other European and American cities may yield other feasible approaches. London's success in reducing traffic delays may eventually help New York to overcome political opposition to congestion pricing.

SCHOOLS

9. Implement a universal free school meal program with nutritional standards.

New York City already provides free breakfasts to all students and has found success in providing these meals in classrooms. The borough of Islington's decision to subsidize free school meals will provide an opportunity to assess implementation issues and benefits. Free, nutritious and tasty school meals can encourage life time good food habits, reduce competition from unhealthy food outlets, and reduce socioeconomic disparities in access to healthy food. In addition, by linking school food to nutrition education and by engaging parents in school food programs, schools can play an important role in establishing healthier lifetime food choices.

10. Provide tap drinking water in schools by improving infrastructure for water delivery.

Tap water is a cost effective and calorie-free alternative to other beverages served in schools. Creating an infrastructure for delivering filtered water that students and teachers can collect and drink from re-usable containers promotes both human and environmental health. Since sweetened beverages play a key role in obesity, offering free, accessible alternatives may help to reduce soda use.

RESEARCH AND TRAINING

11. Promote research that helps cities understand how to best address health inequalities and childhood obesity

London and New York should cooperate in using their data and research capacities to inform future obesity reduction activities and inform other cities' efforts. By continuing to improve the data systems that monitor childhood obesity, health officials can track citywide prevalence of childhood weights as well as the changing dynamics of social, economic, and geographic disparities. In addition, in partnership with universities, the cities can track the cost and health equity impact of municipal policies and programs that address childhood obesity and disseminate this work internationally. By studying the impact of food advertising and designing and evaluating interventions to counter its adverse effects, the cities can help diminish a powerful influence on obesity. Many professionals, including health providers, educators and youth workers, can contribute to reducing obesity and new efforts are needed to develop and evaluate the needed training programs. Finally, by using urban planning as a tool for changing the built environment to promote health, the cities can foster collaboration between local planners and urban designers, city level planners, health care researchers and providers, and communities.

Table 3. Summary of Recommendations by Sector

Recommendations	Key Actors	
	London	New York
Land use and planning		
1. Use zoning authority, land use review and other municipal authority to limit access to fast food and the promotion of unhealthy foods to children. 2. Use zoning, tax incentives, and publicly owned property to increase the availability of healthy, affordable, and culturally appropriate foods in neighborhoods where it is limited. 3. Incorporate active design principles into building codes, housing strategies, and neighborhood planning.	Mayor's London Plan London Councils Mayor, HCA	Dept of City Planning, Mayor, City Council
Food		
4. Set standards for municipal purchase of food in public agencies and leverage economies of scale to promote food systems that support economic, environmental, and human health. 5. Redefine food safety standards to reflect current threats to health and use the municipal food safety workforce to promote healthier eating.	Mayor London Councils London boroughs' environmental health officers	Mayor, Dept of Health, , Board of Health, food businesses, consumers
Parks and green space		
6. Promote and support urban agriculture as a sustainable and health promoting use of green space. 7. Increase access to and safety of places where people can be physically active.	Mayor and Metropolitan Police	Mayor, Dept of Parks and recreation, advocates
Transportation and Physical Activity		
8. Promote walking and cycling in neighborhoods with high levels of childhood and adult obesity.	Mayor and TfL London Council	Mayor, Dept of Transportation, Metro Transport Authority
Schools		
9.Implement a universal school meals program with nutritional standards that promote health 10. Provide drinking water in schools by improving infrastructure for tap water delivery and bathrooms	Department for Children, Schools and Families. London Councils	NYC and State Depts of Education; food, parents and youth advocacy groups
Research and training		
11. Promote research that helps cities understand how to best address health inequalities and childhood obesity by: • Developing and improving the data systems that monitor childhood obesity so that cities can track and report citywide prevalence as well as information about social, economic, and geographic disparities; • Tracking the cost and outcomes of municipal policies and programs that address childhood obesity and disseminate this work internationally; • Documenting the adverse impact of food marketing practices on children and designing and evaluating strategies to reduce this influence; • Finding the best ways to prepare health providers, educators and others to reduce childhood obesity; and • Using urban planning as a tool for assessing and changing the built environment to promote health.	NHS/PCTs London Health Commission London Health Observatory London Met Academics	Mayor, Dept of Health, universities, researchers

CONCLUSION

Today, both London and New York and their city governments deserve credit for taking action on many fronts to reduce childhood obesity. Few experts believe, however, that current levels of effort are sufficient to avert the growing health, social and economic costs that childhood obesity imposes on our cities. To actually improve health, the modest and small-scale changes that have begun will need to be expanded, strengthened and sustained. Our children and grandchildren depend on us to develop the policies, programs and environments that assure their health and close the gaps in well-being that now divide our cities' residents. By confronting childhood obesity directly, London and New York can show other cities around the world that just as our societies created the conditions that led to rising rates of obesity, so can we reverse this global trend. A Tale of Two ObesCities suggests some steps we can take to realize these obligations and opportunities.

Growing up in New York City, 1926-1938
Adolescent Years in New York City, 1934-1944
Robert Burghardt | 1982-1984
Oil on canvas | Collection of Mrs. Robert Burghardt, 04.38.1-2

APPENDICES

Participants in the London Metropolitan University and City University of New York Childhood Obesity Collaborative

NEW YORK

Sonia Angell: Director of the Cardiovascular Disease Prevention and Control Program, NYC DOHMH

Mary Bassett: Former Deputy Commissioner Health Promotion & Disease Prevention NYC DOHMH

Sabrina Baronberg: Program Development Specialist, Program on Physical Activity and Nutrition, NYC DOHMH

Tracy Cashin: Coordinator, NYC School Food Service

Lauren Dinour: CUNY DPH student

Jonathan Deutsch: Associate Professor, Kingsborough Community College, CUNY

Nick Freudenberg: Distinguished Professor Public Health, Hunter College, CUNY

Eric Goldstein: Chief Executive Officer, NYC Office of School Support Services

Rhonda Johnson: Training Director, NYC DOHMH

Hollie Jones: Assistant Professor of Psychology, Medgar Evers College, CUNY

Maura Kennelly: Special Assistant, Chronic Disease Prevention, NYC DOHMH

Amy Kwan: CUNY DPH student

Karen Lee: Deputy Director of Chronic Disease prevention and Control NYC DOHMH

Kimberly Libman: CUNY PhD candidate Environmental Psychology

Trudy Lieberman: Director of the Health and Medicine Reporting Program, CUNY Graduate School of Journalism

Kate MacKenzie: Director of Program and Policy Development at City Harvest and Convener of the NYC Food and Fitness Partnership

Herman McKie: Nutrition Coordinator, NYC School Food Service

Iris Mercado: Assistant Professor of Urban Health Studies, Hostos Community College, CUNY

Lorraine Mongiello: Director of the CUNY Campaign Against Diabetes and CUNY DPH

Cathy Nonas: Director of the Physical Activity and Nutrition Program NYC DOHMH

Kenneth Olden: Dean of the CUNY School of Public Health at Hunter College

Roger Platt: Director of the NYC Office of School Health

Jan Poppendieck: Professor of Sociology, Hunter College, CUNY

Joan Seigel: Citizen's Committee for Children of New York

Lynn Silver: Assistant Commissioner of Chronic Disease Prevention and Control NYC DOHMH

Arlene Spark: Associate Professor of Nutrition, Hunter College, CUNY

Scott Stringer: Manhattan Borough President

Anahi Viladrich: Associate Professor of Urban Public Health at Hunter College

Ming-Chin Yeh: Associate Professor of Nutrition and Food Sciences, Hunter College, CUNY

LONDON

Deb Albon: Senior Lecturer in Early Childhood Studies, London Metropolitan University

Julia Atkins: Research Fellow, London Metropolitan University

Bob Aylett, Deputy Vice Chancellor, London Metropolitan University

Anna Baker: Principal Lecturer in Health Psychology, London Metropolitan University

Alex Bax: Senior Policy Adviser, Health and Sustainable Development to the Mayor

Dee Bhakta: Senior Lecturer in Human Nutrition, London Metropolitan University

Duncan Bowie: Reader in Urban Planning and Regeneration, London Metropolitan University

Michael Crawford: Director of the Institute of Brain Chemistry and Human Nutrition, London Metropolitan University

Daniel Cohen: Senior Lecturer in Sports Science, London Metropolitan University

Helen Davies: Health Policy Manager, Greater London Authority

George Ellison: Professor of Interdisciplinary Studies and Director of the London Metropolitan University Graduate School

Graeme Evans: Director, Cities Institute, London Metropolitan University

Gail Findlay: Coordinator London Health Commission

Ruzanna Gevorgyan: Principal Lecturer Primary Care Development, London Metropolitan University

Bobbie Jacobson: London Health Observatory

Tim Lobstein: Coordinator of the International Obesity Task Force child and Adolescent Research Program

David McCarthy: Institute Health Research and Policy, London Metropolitan University

Livingstone Musoro: Senior Lecturer Health Studies, London Metropolitan University

Eileen O'Keefe: Health Strand Lead, London Metropolitan University

Neville Rigby: Director of Policy and Public Affairs International Obesity Task Force

Fiona Sim: Coordinator London Teaching Public Health Network
Jo Skinner: Director Primary Health & Social Care Centre; Lead London Met Health & Wellbeing Centre
Rebecca Smith: Senior Policy Officer, Greater London Assembly
Aparna Srivastava: Senior Lecturer in Human Nutrition, London Metropolitan University
Stephen Thake: Reader in Urban Policy, London Metropolitan University
Cheikh Traore: Senior Policy Officer, Greater London Assembly
Jack Winkler: Professor of Nutrition Policy, London Metropolitan University
John Yudkin: Professor International Health and Medical Development, University College London

APPENDIX 2 DEFINITIONS AND MEASUREMENT OF CHILDHOOD OBESITY

Note on definitions: There is debate about defining overweight and obesity for children and how to develop internationally relevant standards for population based monitoring of weight in young people. In the US, childhood obesity is defined and measured using Body Mass Index (BMI) and growth charts developed by the Centers for Disease Control (CDC). Specifically, young people between the ages of 2 and 18 who have BMIs equal to or greater than the 95th percentile of the age and gender specific BMI charts developed by the CDC are defined as obese. In England, the National Child Measurement Programme also uses BMI to define childhood obesity. Prevalence rates are calculated by referencing BMIs to age and gender specific UK National percentile classifications, again using the 95th percentile to define obesity and the 85th percentile to define overweight. Making international comparisons of childhood obesity prevalence is complicated by the fact that the growth charts that underlie the percentile classifications may be based on nation specific reference populations. The World Health Organization and the International Obesity Task Force (IOTF) have each developed international references for childhood obesity. The IOTF standard is based on pooling international data on children's growth and weight. London Met researchers have shown that waist circumference gives a more accurate and reliable measure of body fatness than BMI. This measure is more sensitive to differences amongst ethnic minority groups, and a better marker than BMI for risk for type 2 diabetes.

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