

RACIAL DISPARITIES IN CHILDHOOD OBESITY: CAUSES, CONSEQUENCES, AND SOLUTIONS

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INTRODUCTION

*I couldn't open up a magazine, you couldn't read a newspaper, you couldn't turn on the TV without hearing about the obesity epidemic in America.*¹

Public awareness of the childhood obesity epidemic has become nearly as ubiquitous as obesity itself, and has propelled the issue onto the national stage. The topic of childhood obesity appears to be entrenched in both the political discourse and popular culture of the United States. For example, the spring 2010 premier of “Jaime Oliver’s Food Revolution,” a reality television program chronicling the efforts of a celebrity chef to combat the expanding waistlines of children in a West Virginia community, drew 7.5 million viewers.² During the State of the Union Address in January of the same year, President Obama announced that First Lady Michelle Obama would be leading a nationwide campaign to address childhood obesity.³ With such acute public interest and concern, it is no great surprise that legal scholarship on the topic of childhood obesity abounds. However, very little has been written about racial disparities in childhood obesity.⁴ Given the intensity of the media spotlight shined on the topic of obesity generally, and the plethora of notes, comments, and articles on the topic, this omission is startling. This article attempts to rectify this glaring oversight.

The racial gap in childhood overweight and obesity is just one of many health-related racial disparities. Racial disparities exist in access to health care,⁵ quality of care,⁶ patient

¹ Jeff Otto, *Interview with Morgan Spurlock*, IGN ENTERTAINMENT (May 4, 2004), <http://movies.ign.com/articles/511/511370p1.html> (exploring the inspiration for the film *Supersize Me* and the experience of director Morgan Spurlock in filming the movie).

² Robert Seidman, *TV Ratings: March Madness Wins; “Jaime Oliver’s Food Revolution” Cooks for ABC*, ZAP2IT (Mar. 27, 2010), <http://tvbythenumbers.zap2it.com/2010/03/27/tv-ratings-march-madness-wins-jamie-olivers-food-revolution-cooks-for-abc/46281>.

³ *Remarks by the President in State of the Union Address*, THE WHITE HOUSE (Jan. 27, 2010), <http://www.whitehouse.gov/the-press-office/remarks-president-state-union-address>.

⁴ *But see* Erika B. Navarro, Note, *No Such Thing as Free Lunch: Supplementing Federal Nutrition Laws to Effectively Combat Obesity in Minority and Low-Income Children*, 9 RUTGERS RACE & L. REV. 365, 365 (2008) (“In this note I examine the socioeconomic disparities faced by minority and low-income children and how these disparities can render federal nutrition laws ineffective.”).

⁵ Access to healthcare entails “having ‘the timely use of personal health services, to achieve the best health outcomes.’” AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, NATIONAL HEALTHCARE DISPARITIES REPORT 113 (2007) available at <http://www.ahrq.gov/qual/nhdr07/nhdr07.pdf> [hereinafter DISPARITIES REPORT]. Because “[h]ealth insurance facilitates entry into the health care system,” levels of insurance coverage have been used as a proxy to analyze access to healthcare more generally. *Id.* at 114. The National Healthcare Disparities Report found

compliance,⁷ and in chronic disease rates⁸ and outcomes.⁹ Given this reality, racially disparate rates of childhood obesity are likely to have compounded consequences. Since a greater percentage of minority children are obese as compared with white children, a greater percentage of minority youth will likely develop chronic illnesses such as diabetes, asthma, and cardiovascular disease, which have been linked to childhood obesity.¹⁰ Racial disparities in access to care, quality of care, and chronic disease management will exacerbate disparities in disease outcomes and health status. Thus, by situating the gap in childhood obesity rates in the broader context of racial disparities in health care, the actual consequences of this racial gap become clear. Every effort should be made to reduce these racial disparities in childhood obesity and avoid these amplified costs.

socio-economic status “explains some but not all” of the racially disparate rates of insurance coverage. *Id.* at 117. What impact the Patient Protection and Affordable Care Act will have on health insurance coverage and access to healthcare among minority populations remains to be determined. Another indicator of access to healthcare is whether an individual has a usual healthcare provider, such as a primary care doctor. *Id.* at 120-21. Here too, the data reflects racial disparities. *Id.*

⁶ Quality healthcare is effective, timely, patient-centered, safe, efficient and equitable. *Id.* at 31. The quality of healthcare a patient receives can be assessed by evaluating a multitude of indicators, including:

Clinical performance measures of how well providers deliver specific services needed by specific patients, such as whether children get the immunizations that they need; [a]ssessments by patients of how well providers meet health care needs from the patient’s perspective, such as whether providers communicate clearly; [and] [o]utcome measures—such as death rates from cancers preventable by screening—that may be affected by the quality of health care received.

DISPARITIES REPORT, *supra* note 5. According to the National Healthcare Disparities Report, racial disparities exist in rates of child immunization, percentage of parents reporting poor communication with their children’s healthcare provider, and rates of cancer screening. *Id.* at 4-7. These particular differences are only a subset of the many factors that suggest a racial gap in quality of healthcare.

⁷ Compare Michael Dickson & Craig A. Plauschinat, *Racial Differences in Medication Compliance and Healthcare Utilization among Hypertensive Medicaid Recipients: Fixed-Dose vs Free-Combination Treatment*, 18 ETHNICITY & DISEASE 204, 204 (2008) (finding higher rates of patient compliance with hypertensive medication schedules among African-Americans than Whites), with Dennis E. Daniels, Antonio A. Rene & Vernie R. Daniels, *Race: An Explanation of Patient Compliance – Fact or Fiction?*, 86 J. NAT’L MED. ASS’N 20, 24 (1994) (concluding that race was not an important variable in patient compliance with hypertensive medication programs).

⁸ See, e.g., Diane R. Gold & Rosalind Wright, *Population Disparities in Asthma*, 26 ANN. REV. OF PUB. HEALTH 89, 95 (2005) (documenting higher rates of asthma among African-Americans than Whites); Carol L. Link & John B. McKinlay, *Disparities in the Prevalence of Diabetes: Is it Race/Ethnicity or Socioeconomic Status? Results from the Boston Area Community Health (BACH) Survey*, 19 ETHNICITY & DISEASE 288, 288 (2009) (noting that “[f]ederal agencies . . . and professional organizations . . . continue to identify race/ethnicity as a major determinant of the prevalence of diabetes in the United States,” and reporting that although racial disparities in diabetes are less pronounced when socioeconomic status and education level are controlled for, they nevertheless persist); Eric Peterson & Clyde W. Yancy, *Eliminating Racial and Ethnic Disparities in Cardiac Care*, 360 NEW ENG. J. MED. 1172, 1172 (2009) (“The incidence of hypertension is several times as high among blacks as among whites.”).

⁹ See, e.g., DISPARITIES REPORT, *supra* note 5, at 42 (reporting that lower extremity amputations in adults with diabetes due to poor disease management were approximately three times higher among African-Americans and Hispanics as compared to Whites); Gold & Wright, *supra* note 8, at 95 (noting higher rates of hospitalization and mortality among African-Americans with asthma than Whites); Peterson & Yancy, *supra* note 8, at 1172 (“Although, black patients with coronary disease, acute myocardial infarction, or heart failure have short-term outcomes that are at least as good as those among white patients, their long-term survival, readmission rates, and functional outcomes tend to be worse.”).

¹⁰ See *infra* Part I.B and accompanying notes.

Although politicians, policy gurus, entrepreneurs and plaintiff's attorneys have all formulated solutions to the obesity epidemic rooted in their respective fields, this article will focus solely on proposed legislative solutions.¹¹ While legislative proposals aim to reduce childhood obesity universally, they may not benefit children equally. In order to ensure that efforts to decrease childhood obesity are effective among African-American, Hispanic, and Native-American children and adolescents, it is important to identify and understand the contributors to childhood obesity that influence these children differently and/or at greater rates than white children. By examining the root causes and nature of racial disparities in childhood overweight, we will be more able to predict the impact of various types of legislation on obesity among minority youth. The goal of legislators, policy-makers and litigators should not be merely to reduce the racial gap, but to reduce rates of childhood obesity across the board. Finding effective solutions for African-American, Hispanic, and Native-American youth is essential to attaining this goal.

This paper will begin by providing background information about the epidemic of childhood obesity in Part II. To set the stage for the analysis that follows, this section will discuss the prevailing rates of obesity and identify its costs and consequences. Part III will examine three distinct racial disparities in childhood obesity: disparate prevalence, disparate rates of increase, and disparate likelihood of remaining obese into adulthood. Next, Part IV will identify and group causes of and contributors to the racial gap according to their source. Finally, Part V will identify and critique three legislative responses particularly well-suited to reducing the higher levels of obesity among minority children.

I. CHILDHOOD OBESITY IN THE UNITED STATES—GRASPING THE ENORMITY OF THE PROBLEM

A. *The Magnitude of the Problem—Childhood Obesity is on the Rise in the U.S.*

The number of overweight and obese children in the United States is staggering both as an absolute number and as a percentage of the population. The most commonly used measure of weight status, the Body Mass Index ("BMI"), measures weight in relation to height and classifies overweight and obesity for children and adolescents by age- and sex-specific percentiles.¹² In

¹¹ See, e.g., Michelle M. Mello, Eric B. Rimm & David M. Studdert, *The McLawsuit: The Fast-Food Industry and Legal Accountability for Obesity*, 22 HEALTH AFFAIRS 207, 207-16 (2003) (discussing the use of fast-food litigation to combat rising levels of obesity); Ian Ayres & Barry Nalebuff, *Skin in the Game*, FORBES.COM (Nov. 13 2006), <http://www.forbes.com/forbes/2006/1113/156.html> (proposing a business model in which customers buy weight-loss bonds that pay them dividends if they successfully meet certain weight-loss goals).

¹² Centers for Disease Control and Prevention, *Overweight and Obesity: Defining Childhood Overweight and Obesity*, <http://www.cdc.gov/obesity/childhood/defining.html> (last visited Feb. 26, 2010) [hereinafter CDC, *Defining*]. The popularity of the BMI method is likely due to its practicality; the only measurements required for calculating BMI, an individual's height and weight, are easy to obtain. *Id.* The BMI method for children is based on age- and sex-specific percentiles rather than a fixed numeric threshold:

For children and adolescents (aged 2–19 years), the BMI value is plotted on the CDC [Centers for Disease Control and Prevention] growth charts to determine the corresponding BMI-for-age percentile. Overweight is defined as a BMI at or above the 85th percentile and lower than the 95th percentile. Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex. These definitions are based on the 2000 CDC Growth Charts for the United States and . . .

2008, there were 25 million overweight and obese children and adolescents in the U.S.¹³ Research has shown that these obese and overweight youth account for over one-third of the total population of American youth.¹⁴

Rates of overweight and obesity have not always been so high; there has been a dramatic increase in these rates over the last three decades. Data collected in federal surveys¹⁵ from 1976 to 1980 and from 2007 to 2008 show that “the prevalence of obesity has increased: for children aged 2–5 years, prevalence increased from 5.0% to 10.4%; for those aged 6–11 years, prevalence increased from 6.5% to 19.6%; and for those aged 12–19 years, prevalence increased from 5.0% to 18.1%.”¹⁶ The doubling and even tripling of childhood obesity rates over the course of the last thirty years clearly demonstrates that childhood obesity is on the rise.¹⁷

B. Do Big Kids Have Big Problems? The Effect of Overweight and Obesity on Children’s Health Status

The health consequences of childhood obesity can be dire. Although adult obesity¹⁸ has long been associated with an increased risk of many diseases, only recently have researchers begun to document the association between obesity in youth and various forms of disease. Diabetes provides one example of this phenomenon. The CDC reports that,

Type 2 diabetes is increasingly being reported among children and adolescents who are obese. While diabetes and glucose intolerance, a precursor of diabetes,

[c]lassifications of overweight and obesity for children and adolescents are age- and sex-specific because children’s body composition varies as they age and varies between boys and girls.

Id. Because the definitions used to calculate BMI have not been reset since 2000, more than five percent of children may, and do in fact, fall at or above the ninety-fifth percentile. *Id.*

Other methods used to identify childhood obesity and overweight include tricep or trunk skinfold thickness, waist circumference, and waist-to-hip ratio. Thomas N. Robinson, *Reducing Children’s Television Viewing to Prevent Obesity: A Randomized Controlled Trial*, 282 JAMA 1561, 1561 (1999).

¹³ Editorial, *Obesity: Active Living in Diverse and Disadvantaged Communities*, OBESITY & DIABETES WEEK, Apr. 21, 2008, at 171.

¹⁴ Leah Loeb, Comment, *Childhood Obesity: The Law’s Response to the Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity*, 12 J. HEALTH CARE L. & POL’Y 295, 297 (2009).

¹⁵ The National Center for Health Statistics (“NCHS”), as part of the CDC, conducts the National Health and Nutrition Examination Survey (“NHANES”) program. The surveys collected by the program consist of both physical examinations and interviews. Centers for Disease Control and Prevention, *National Health and Nutrition Examination Survey*, <http://www.cdc.gov/obesity/data/trends.html> (last visited Nov. 22, 2010).

¹⁶ Centers for Disease Control and Prevention, *Overweigh and Obesity: Childhood Overweight and Obesity, U.S. Obesity Trends*, <http://www.cdc.gov/obesity/childhood/index.html> (last visited Mar. 17, 2011) [hereinafter CDC, *Obesity*].

¹⁷ Recent data indicates that the rapid growth of this problem may be slowing down. The CDC reported that “the obesity epidemic may be stabilizing.” Centers for Disease Control and Prevention, *Overweight and Obesity: Obesity Prevalence Among Low-Income, Preschool-Age Children 1998-2008*, <http://www.cdc.gov/obesity/childhood/lowincome.html> (last visited Mar. 17, 2011). For example, “[t]he prevalence of obesity in low-income two to four year-olds increased from 12.4 percent in 1998 to 14.5 percent in 2003 but rose to only 14.6 percent in 2008.” *Id.* Nevertheless, obesity rates show no sign of decreasing and remain a significant problem.

¹⁸ An adult is considered overweight if his or her BMI is between twenty-five and thirty, and obese if it is thirty or greater. CDC, *Defining*, *supra* note 12.

are common health effects of adult obesity, only in recent years has Type 2 diabetes begun to emerge as a health-related problem among children and adolescents.¹⁹

Childhood diabetes can cause kidney failure and cardiovascular disease (“CVD”).²⁰ Risk factors for CVD, such as high blood pressure, abnormal glucose tolerance and high levels of cholesterol, have been reported in obese youth;²¹ in fact, one study showed that seventy percent of obese children between the ages of five and nineteen have one risk factor, and thirty-nine percent had two or more risk factors.²² Studies have shown an association between childhood asthma, which has tripled in incidence since 1980,²³ and childhood obesity.²⁴ Obese children are at risk of developing many associated chronic illnesses.²⁵

The consequences of childhood obesity are not merely physical, but psychological, social, and academic as well. As one might imagine, overweight and obese children and adolescents are often the target of taunts, harassment and intolerance.²⁶ The social discrimination that these youth face may come from their peers, family, school, or even members of the general public. This, in turn, can cause low self-esteem and impede social functioning.²⁷ Some studies even indicate that obese children struggle academically,²⁸ although others show no such association.²⁹ Social stigmatization is one of the many costs of childhood overweight and obesity.

C. Just a Little Baby Fat or a Life-Long Chronic Condition? The Likelihood of Obese and Overweight Children Becoming Obese and Overweight Adults

Childhood overweight and obesity is problematic not only because of its impact on the

¹⁹ Centers for Disease Control and Prevention, *Obesity and Overweight: Consequences*, <http://www.cdc.gov/obesity/childhood/consequences.html> (last visited Mar. 17, 2011) [hereinafter CDC, *Consequences*].

²⁰ *Id.*

²¹ See generally William H. Dietz, *Health Consequences of Obesity in Youth: Childhood Predictors of Adult Disease*, 101 PEDIATRICS 518, 521 (1998).

²² David S. Freedman et al., *Cardiovascular Risk Factors and Excess Adiposity Among Overweight Children and Adolescents: The Bogalusa Heart Study*, 150 J. PEDIATRICS 12, 14 (2007).

²³ Editorial, *Healthy People 2000: 85% of Goals Unmet*, AM. HEALTH LINE, June 11, 1999, at 1.

²⁴ Elisabeth Luder, Thomas A. Melnick & Mary DiMaio, *Association of Being Overweight with Greater Asthma Symptoms in Inner City Black and Hispanic Children*, 132 J. PEDIATRICS 699, 699 (1998) (finding not only a higher prevalence of asthma among overweight children, but also an association between overweight and more severe asthma symptoms).

²⁵ CDC, *Consequences*, *supra* note 19.

²⁶ See generally Dietz, *supra* note 21, at 518-520 (discussing the various forms of social discrimination that overweight and obese youth encounter); see also M. B. Schwartz & R. Puhl, *Childhood Obesity: A Societal Problem to Solve*, 4 OBESITY REV. 57, 65 (2003) (noting the lack of research into teasing experienced by obese youth).

²⁷ Schwartz & Puhl, *supra* note 26, at 65 (reviewing studies that find lower self-esteem among obese youth, but noting that other studies do not support this conclusion).

²⁸ *Id.* (reporting on a study finding lower levels of education among overweight adolescents, and noting lower rates of college acceptance among obese students as compared to non-obese students with equivalent academic records).

²⁹ Joann Williams et al., *Health-Related Quality of Life of Overweight and Obese Children*, 293 JAMA 70, 70 (2005).

health status of children, but also because of its impact on the likelihood of adulthood overweight and obesity. Although their specific results vary,³⁰ a number of studies have found that overweight and obese youth are very likely to become overweight and obese adults. For instance, “one study found that approximately 80% of children who were overweight at aged 10–15 years were obese adults at age 25 years.”³¹ Another survey showed that “[i]n 70% of cases, an overweight adolescent will remain overweight or obese as an adult.”³² Additionally, the younger an individual becomes overweight, the more severe adulthood obesity is likely to be for that individual.³³ Therefore, the effects of being overweight and obese in childhood are likely to continue beyond youth, into adulthood.

Since overweight and obese children and adolescents are likely to remain overweight and obese into adulthood, they are more likely to suffer from the diseases associated with adult obesity and overweight. The risks and consequences associated with adulthood obesity are numerous and well-documented. To name just a few, “[o]besity, defined as a body mass index (BMI) over thirty, is directly related to the onset of diseases including coronary heart disease, type II diabetes, stroke, gall bladder disease, sleep apnea, respiratory disease, hypertension, osteoarthritis, and some cancers.”³⁴ In fact, the correlation between overweight in youth and obesity-related diseases in adulthood is so strong, that for the first time in 200 years, the life expectancy of the current generation of children is expected to be less than that of their parents.³⁵

D. *Big People Cost Big Money—The Economic Costs of Adult Obesity*

As if the costs to health status and social and psychological welfare were not great enough, adulthood obesity costs the United States billions every year in medical expenses, disability payments, and lost productivity. In medical expenses alone, obesity costs a staggering \$47.5 billion annually.³⁶ The CDC estimates that when overweight is also taken into account, the cost of medical treatment is closer to \$75 billion a year.³⁷ On top of that, American businesses spend an additional \$13 billion every year on disability insurance, sick leave, and higher health insurance premiums as a direct result of obesity.³⁸ The Food and Drug Administration (“FDA”)

³⁰ See, e.g., Mike Mitka, *Experts weigh Pros and Cons of Screening and Treatment for Childhood Obesity*, 300 JAMA 1401, 1402 (2008) (“For those whose childhood BMIs were in the 95th percentile or higher, 6% had normal-weight BMIs in adulthood, 16% were characterized as overweight, and 77% were designated as obese.”).

³¹ CDC, *Obesity*, *supra* note 16 (citing David S. Freedman et al., *Relationship of Childhood Obesity to Coronary Heart Disease Risk Factors in Adulthood: The Bogalusa Heart Study*, 108 PEDIATRICS 712, 713 (2001)).

³² Loeb, *supra* note 14, at 298.

³³ David S. Freedman et al., *Relationship of Childhood Obesity to Coronary Heart Disease Risk Factors in Adulthood: The Bogalusa Heart Study*, 108 PEDIATRICS 712, 715 (2001) (finding greater obesity in adulthood, yet concluding that the age of obesity onset does not show consistent associations with adult risk factor levels).

³⁴ Loeb, *supra* note 14, at 295.

³⁵ Pam Belluck, *Children’s Life Expectancy Being Cut Short By Obesity*, N.Y. TIMES, Mar. 17, 2005, <http://query.nytimes.com/gst/fullpage.html?res=9F01E3D7133CF934A25750C0A9639C8B63>; see also, David B. Allison et al., *Annual Deaths Attributable to Obesity in the United States*, 282 JAMA 1530, 1530 (1999) (finding the “mean estimate of deaths attributable to obesity in the United States” to be between 280,184 and 324,940).

³⁶ Loeb, *supra* note 14, at 301-02.

³⁷ *Id.*

³⁸ *Id.*

reported that in 2004, obesity cost the United States a whopping \$117 billion.³⁹ With obesity on the rise among children, and the strong likelihood that obese children will become obese adults, it is likely that the percentage of the adult population in the United States which is obese will increase, thus driving the economic impact of obesity even higher.

II. THE RACIAL GAP—RACIAL DISPARITIES IN THE PREVALENCE, INCREASE, AND OUTCOME OF CHILDHOOD OBESITY

Childhood overweight and obesity is a problem across the board in the United States; there is, however, a measurable and marked gap in the impact that the obesity epidemic has had on children of different racial backgrounds. First, disparities along racial lines in the rates of overweight and obesity are significant and growing. Second, minority youth who are obese are more likely than their white counterparts to remain obese into adulthood. Taken together, these disparities make up what this paper will refer to as “the racial gap.”

Overweight and obesity is more prevalent among children of a minority background than among white children. A study published in the *Archives of Pediatrics & Adolescent Medicine* found that 31.2% of American Indian children, 22% of Hispanic children, 20.8% of African-American children, and 15.9% of white children were obese.⁴⁰ This means that American Indian youth are nearly twice as likely as white youth to be obese and Hispanic and African-American children are over thirty percent more likely to be obese than white children. These gaps manifest very early in life. One study found that by three years of age, Hispanic children already had higher rates of obesity than African-American or white children.⁴¹ Although the differences exist in both boys and girls, they are much more pronounced in girls:

The most recent NHANES data (2003–2006) showed that for boys, aged 12–19 years: The prevalence rate of obesity was higher among adolescent Mexican-American boys (22.1%) than among non-Hispanic white boys (17.3%) and black boys (18.5%) . . . for girls, aged 12–19 years: Non-Hispanic black girls had the highest prevalence of obesity (27.7%) compared to that of non-Hispanic white (14.5%) and Mexican-American (19.9%) girls.⁴²

While it is very difficult to separate race from socio-economic status completely,⁴³ studies show that even when socio-economic factors are controlled for, racial disparities in the prevalence of

³⁹ *Combating the obesity epidemic: Hearing before H. Comm. on Gov't Reform*, 108th Cong. (2004) (statement of Lynn C. Swann, Chairman of President's Council on Physical Fitness and Sports) available at <http://www.fda.gov/NewsEvents/Testimony/ucm113816.htm> (stating that with obesity on the rise among children, and the strong likelihood that obese children will be obese adults, it is likely that the percentage of the adult obese population in the U.S. will increase, thus increasing the economic impact of obesity).

⁴⁰ Sarah E. Anderson & Robert C. Whitaker, *Prevalence of Obesity Among US Preschool Children in Different Racial and Ethnic Groups*, 163 *ARCHIVES PEDIATRIC & ADOLESCENT MED.* 344, 347 (2009).

⁴¹ Editorial, *Pediatric Obesity: Hispanic Preschoolers More Likely to be Obese than Black or White Children*, *MANAGED CARE L. WKLY.*, July 2, 2006, at 1 [hereinafter *Pediatric Obesity*].

⁴² Centers for Disease Control and Prevention, *Overweight and Obesity: NHANES Survey (1976-1980 and 2003-2006)*, <http://www.cdc.gov/obesity/childhood/prevalence.html> (last viewed Feb. 26, 2010) [hereinafter *CDC, NHANES*].

⁴³ Admittedly, race and socio-economic status are interconnected. Not all of the studies and surveys discussed in this article separate one from the other. I have specifically noted those studies that do.

childhood overweight and obesity remain.⁴⁴

Rates of increase in the prevalence of childhood obesity and overweight also differ according to race. An analysis of the NHANES surveys conducted between 1988 and 1994, and between 2003 and 2006, shows that the fastest rate of increase in the prevalence in obesity amongst adolescent girls occurred in non-Hispanic black girls (14.5%), followed by Mexican-American girls (10.7%), and finally non-Hispanic white girls (7.1%).⁴⁵ The same survey showed only slightly higher rates of increase in prevalence of obesity among adolescent Mexican-American boys (8.0%) and adolescent non-Hispanic black boys (7.8%) than for adolescent non-Hispanic white boys (5.7%).⁴⁶ The fact that the growth in rates of obesity are higher for minority children compared to white children means that the racial gap in rates of childhood obesity will only continue to widen, if left unchecked.

Finally, research shows that racial disparities in rates of childhood obesity become racial disparities in adulthood obesity. Because overweight and obese children are highly likely to remain overweight and obese into adulthood, any racial gap in childhood obesity may likely become a racial gap in adulthood obesity.⁴⁷ Further, research shows that “[b]lack and Hispanic females are more likely than white females to remain obese from adolescence into young adulthood.”⁴⁸ The well-documented racial gap in adulthood overweight and obesity further suggests that racial disparities do not end after childhood, but persist into adulthood.⁴⁹

III. CAUSES OF THE RACIAL DISPARITIES IN CHILDHOOD OBESITY

Research into the causes of childhood obesity reveals a complex set of contributing factors that affect individual children in distinct ways. At the most basic level, obesity and overweight occur when children regularly consume more calories than they expend.⁵⁰ However, this imbalance in caloric intake and expenditure is far from the whole story. Genetic, environmental, and behavioral factors all play a part in this phenomenon.⁵¹ Researchers posit that food choices at school,⁵² decreased physical activity,⁵³ increased television viewing,⁵⁴ reduced

⁴⁴ *Pediatric Obesity*, *supra* note 41.

⁴⁵ CDC, *NHANES*, *supra* note 42.

⁴⁶ *Id.*

⁴⁷ See discussion *supra* Part I.C.

⁴⁸ Hedwig Lee, Kathleen Mullan Harris & Penny Gordon-Larsen, *Life Course Perspectives on the Links Between Poverty and Obesity During the Transition to Young Adulthood*, 28 *POPULATION RES. & POL’Y REV.*, 505, 523 (2008).

⁴⁹ Allison C. Morrill & Christopher D. Chinn, *The Obesity Epidemic in the United States*, 25 *J. PUB. HEALTH POL’Y* 353, 354 (2004) (reporting that 78% of non-Hispanic Black women are overweight and 50.8% are obese, 57.5% of non-Hispanic White women are overweight and 30.6% are obese, 71.8% of Hispanic women are overweight and 40.1% are obese, 60.1% of non-Hispanic Black men are overweight and 28.8% are obese, 67.5% Non-Hispanic white men are overweight and 27.7% are obese, 74.4% of Hispanic men are overweight and 29.4% are obese).

⁵⁰ Centers for Disease Control and Prevention, *Overweight and Obesity: Contributing Factors*, <http://www.cdc.gov/obesity/childhood/causes.html> (last visited Mar. 17, 2011) [hereinafter *CDC, Factors*].

⁵¹ *Id.*

⁵² See Editorial, *Obesity: Children Obese Due to a Host of Unhealthy Pressures*, *OBESITY & DIABETES WEEK*, Oct. 8, 2007, at 7 [hereinafter *Unhealthy Pressures*] (“[T]he vast majority of middle schools (67 percent) and high schools (83 percent) have contracts with a soft drink bottling company, which in many cases gives students access to soft drinks all day long.”).

access to healthy foods,⁵⁵ and parental influence⁵⁶ all contribute to overweight and obesity. By no means exhaustive, this small list illustrates the complexity of causal factors for overweight and obesity.

Although there is a plethora of scholarship regarding the causes of childhood obesity generally, there is considerably less research about minority populations. Despite this deficiency, “the available evidence clearly shows that the higher rates of obesity in minority and low-income communities are associated with a plethora of unfavorable influences.”⁵⁷ This Part will examine influences that might help explain not just overweight and obesity in children in general, but also the disparate rate of overweight and obesity between white children and minority children. For purposes of this analysis, I have grouped these causes of overweight and obesity into three broad categories: school-based causes, neighborhood-based causes, and family-based causes. These classifications not only shed light on the root sources of the racial gap but also should help to guide legislative responses to childhood overweight and obesity.

A. School-Based Causes and Contributors

Schools may be one contributing factor to the racial gap in childhood overweight and obesity. Children and adolescents spend a significant portion of their lives at school and are susceptible to school-based influences:

Students spend about seven hours a day for 180 days a year in the school environment and most consume at least one of three meals per day in school. From 35% to 40% of adolescents’ total energy intake is being consumed in secondary school. Schools influence a child’s eating, drinking, and fitness behavior.⁵⁸

The influence schools have on children likely differs according to race. It is well documented that

⁵³ See Philip R. Nader et al., *Moderate-to-Vigorous Physical Activity from Ages 9 to 15 Years*, 300 JAMA 295, 295 (2008) (“Decreased physical activity among American children and adolescents plays a critical role in the increase in childhood obesity. . . . [A]t least 60 minutes per day of moderate-to-vigorous physical activity (MVPA) is recommended . . . at age 9 years, children engaged in MVPA approximately 3 hours per day on both weekends and weekdays. Weekday MVPA decreased by 38 minutes per year, while weekend MVPA decreased by 41 minutes per year. By age 15 years, adolescents were only engaging in MVPA for 49 minutes per weekday and 35 minutes per weekend day.”).

⁵⁴ See Thomas N. Robinson, *Does Television Cause Childhood Obesity?*, 279 JAMA 959, 959 (2008) (“Extrapolation of current viewing data reveals that between the ages of 2 and 17 years, U.S. children spend an average of more than 3 years of their waking lives watching television, not including time spent watching videos, playing video games, or using a computer.”).

⁵⁵ *Unhealthy Pressures*, *supra* note 52 (“UIC economist Lisa Powell found a statistically significant association between the availability of supermarkets and lower adolescent and overweight status.”).

⁵⁶ Desiree M. Seeyave et al., *Ability to Delay Gratification at Age 4 Years and Risk of Overweight at Age 11 Years*, 163 ARCHIVES PEDIATRIC & ADOLESCENT MED. 303, 306 (2009) (reporting that children of overweight mothers demonstrate less self-control around food).

⁵⁷ Shiriki Kumanyika & Sonya Green, *Targeting Interventions for Ethnic Minority and Low-Income Populations*, 16 FUTURE CHILD. 187, 199 (2006).

⁵⁸ Cheryl L. Hayne et al., *Regulating Environments to Reduce Obesity*, 25 J. PUB. HEALTH POL’Y 391, 398 (2004).

school environments are disparate across racial lines. Children of color are more likely to attend urban, high-poverty schools with fewer resources, less-credentialed teachers, and lower levels of parent involvement than white children.⁵⁹ While an examination of the historical and social causes of racial inequality in education is outside the scope of this article, the fact that children spend a great deal of time in school environments rife with racial disparities may be important to understanding and addressing the racial gap in childhood obesity.

Given the amount of time children spend in school annually, and the racial inequalities in school funding, location, type, and size, schools would appear to be a logical source of the racial gap in childhood obesity. Studies lend some support for this hypothesis; research has shown important racial differences in school nutrition, access to competitive foods, physical education, and participation in school-sponsored sports. These disparities are discussed in greater detail below.

1. School Nutrition

The food served at school as part of the National School Lunch Program (“NSLP”) and the National School Breakfast Program (“NSBP”) may contribute to childhood obesity. As mentioned above, children consume more than one-third of their daily calories while in school.⁶⁰ These calories may come from the NSBP, the NSLP, meals packed from home, or food purchased from a vending machine or school store. The NSLP offers federal funding to support the provision of free or reduced-cost meals to American children and adolescents.⁶¹ In 2008, the program operated in more than 101,000 public and private schools and provided lunches for 30.5 million students a day.⁶² The NSBP operates similarly to the NSLP and supplies breakfasts for seven million students every day.⁶³ Data from the NHANES surveys shows that non-Hispanic Black students and Hispanic students were more likely than non-Hispanic white students and Asian students to participate in the NSLP.⁶⁴ Consequently, any negative influence the NSLP or NSBP has on rates of childhood obesity and overweight is likely to have a greater impact on African-American and Hispanic youth as a group.

One goal of the NSLP and the NSBP is to provide nutritionally appropriate and healthful meals, but research indicates that the program is far from meeting this goal. According to the United States Department of Agriculture (“USDA”), which enforces NSLP guidelines,

⁵⁹ Erica Frankenberg & Chungmei Lee, *Race in American Public Schools: Rapidly Resegregating School Districts* (Civil Rights Project Harvard University, Cambridge, MA) 2002 available at <http://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/race-in-american-public-schools-rapidly-resegregating-school-districts>.

⁶⁰ Hayne et al., *supra* note 58.

⁶¹ U.S. Dep’t of Agriculture, *National School Lunch Program*, <http://www.fns.usda.gov/cnd/Lunch/AboutLunch/NSLPFactSheet.pdf> (last visited Apr. 11, 2010) [hereinafter USDA, *Fact Sheet*].

⁶² *Id.*

⁶³ Robert Colin Carter, *The Impact of Public Schools on Childhood Obesity*, 288 JAMA 2180, 2180 (2002).

⁶⁴ Constance Newman & Katherine Ralston, *Profiles of Participants in the National School Lunch Program: Data from Two National Surveys*, (Econ. Research Service, 2006) available at <http://www.ers.usda.gov/publications/eib17/eib17.pdf>. The study also reported that 24.9% of white participants in the program received free lunch as compared with 69.6% of African-American participants. *Id.* at 9. The different levels of participation in the NSLP likely result from and reflect the socioeconomic disparities between different racial groups. *Id.*

[s]chool lunches must meet the applicable recommendations of the [1995] Dietary Guidelines for Americans, which recommend that no more than 30 percent of an individual's calories come from fat, and less than 10 percent from saturated fat. Regulations also establish a standard for school lunches to provide one-third of the Recommended Dietary Allowances of protein, Vitamin A, Vitamin C, iron, calcium, and calories.⁶⁵

Despite these good intentions, shockingly few schools actually comply with the nutritional guidelines. For example, a government study found that eighty-five percent of elementary schools and eighty-seven percent of secondary schools exceeded the requirements for saturated fat.⁶⁶ The problem appears not to be the creation or proliferation of nutritional standards but, rather, the implementation; although the federal government has established nutritional "requirements" for the NSLP, it leaves the decision of what specific foods to serve to local authorities.⁶⁷ An excess of calories,⁶⁸ fat,⁶⁹ and saturated fat in the meals served through the NSLP will have a disparate impact on minority students because they participate in the program at higher rates than white students. Accordingly, research seems to indicate that the poor nutritive value of the meals served through the NSLP and the NSBP may be one of the school-based contributors to the racial gap in childhood overweight and obesity.

2. Competitive Foods

Competitive foods are another school-based contributor to the racial gap in childhood obesity. The term 'competitive foods' is used to denote food and beverage sources in schools other than school-served lunch or breakfast—in other words, foods that compete with the meals being served. Vending machines, school stores, and snack bars are all encompassed by this term. The food and beverages offered through these competitive sources are very often high in fat and sugar content.⁷⁰ Such competitive foods sources have become widespread over the last few decades. For example, a study done by the University of Michigan found that "the vast majority of middle schools (67 percent) and high schools (83 percent) have contracts with a soft drink bottling company, which in many cases gives students access to soft drinks all day long."⁷¹

⁶⁵ USDA, *Fact Sheet*, *supra* note 61, at 1.

⁶⁶ Sally Hubbard, *Taking Roll: An Assessment of State and Local Governance of School Wellness Policies*, 5 IND. HEALTH L. REV. 201, 208 (2008) ("Such violations are common because, in the words of Former Assistant Secretary of Agriculture, Carol Tucker Foremon: [T]he 'USDA has very few tools to require compliance.'").

⁶⁷ USDA, *Fact Sheet*, *supra* note 61, at 1; *see, e.g., School District of Philadelphia: Satellite Lunch Menu*, Apr. 2010, <http://meredith.phila.k12.pa.us/satellitelunchme.html>. In Philadelphia, for example, on the week of April 19, 2010, one local public school served: chicken nuggets on Monday, hamburgers on Tuesday, hotdogs or meatballs on Wednesday, pastrami or turkey sandwiches on Thursday, and pizza on Friday. *Id.*

⁶⁸ *See, e.g., Clifton C. Addison et al., Examination of the Food and Nutrient Content of School Lunch Menus of Two School Districts in Mississippi*, 3 INT'L J. ENVTL. RES. & PUB. HEALTH 278, 283 (2006) (reporting that lunches in one school district exceeded the NSLP guidelines by 644 calories a day on average for students in kindergarten through sixth grade, and 483 calories a day for students in seventh through twelfth grade).

⁶⁹ *See, e.g., id.* (reporting an excess of nearly 29 grams of fat per lunch above the NSLP guidelines for kindergarten through twelfth grade in one school district).

⁷⁰ Carter, *supra* note 63, at 2180.

⁷¹ *Unhealthy Pressures*, *supra* note 52 at 1.

Competitive foods have proliferated through schools and across entire school districts in large part because of the profits schools stand to earn off of these contracts with soda, snack and candy companies.⁷²

Research indicates that the availability of competitive foods impacts students' consumption patterns. An article in the *Journal of the American Medical Association* reported that students are less likely to consume fresh fruits and vegetables when their schools offer competitive foods in addition to the NSLP than when they only offer the NSLP.⁷³ This suggests that competitive foods that are high in sugar, calories, and fat, may be replacing healthier choices, which may in turn contribute to weight gain, overweight, and obesity.

Competitive foods are contributing not only to rising rates of childhood obesity in general, but also to the disparate rate of growth among racial minorities. Professor Jorge Delva of the University of Michigan undertook to study the extent to which children have access to food of poor nutritional value in school.⁷⁴ He concluded that racial minorities have more access to competitive foods and correspondingly less access to healthier foods like low-fat snacks.⁷⁵ The study showed that Hispanic high school students were exposed to fast-food items during school lunch twice as often as African-American or white high school students.⁷⁶ To the extent that the availability of competitive foods in schools contributes to overweight and obesity among students, it does so at disparate levels, and thus is likely contributing to the racial gap in childhood obesity and overweight.

However, there is reason to believe that the influence of competitive drinks is waning. The American beverage industry has voluntarily pledged to withdraw all soda from schools nationwide.⁷⁷ This voluntary withdrawal was set to be completed in seventy-five percent of schools by 2009.⁷⁸ Whether this will come to pass remains to be seen. Additionally, it is possible that sugary fruit juices, Gatorades, or flavored milks may just replace these beverages, thereby limiting the effect of any voluntary withdrawal. Also, there has been no equivalent pledge to withdraw competitive foods from schools, which may further diminish the impact of the beverage industry's efforts.

3. Physical Education and School-Sponsored Sports

One final school-based cause that research indicates contributes to the disparate prevalence of obesity among children of different racial backgrounds is low rates of physical education ("P.E.") and participation in after-school sports. Medical and dietary guidelines recommend that children exercise between thirty and sixty minutes a day.⁷⁹ However, American

⁷² Cf. David S. Almeling, Note, *The Problems of Pouring Rights Contracts*, 53 DUKE L.J. 1111, 1117 (2003) ("[I]n practice, schools encourage students to drink soft drinks because schools need the money that they derive from pouring-rights contracts.").

⁷³ Carter, *supra* note 63, at 2180.

⁷⁴ *Unhealthy Pressures*, *supra* note 52.

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ Christian Nordquist, *Sugary Sodas Withdrawn From Schools, USA*, MED. NEWS TODAY, May 3, 2006, available at <http://www.medicalnewstoday.com/articles/42718.php>.

⁷⁸ *Id.*

⁷⁹ Loeb, *supra* note 14, at 324 ("The Institute of Medicine recommends that children engage in thirty minutes of exercise daily, and the Dietary Guidelines for Americans recommends sixty minutes each day.").

schools are falling far short of providing sufficient physical education to meet these suggestions; a mere 3.8% of elementary schools, and 2.1% of high schools offer P.E. classes on a daily basis.⁸⁰ The CDC reports that daily rates of physical education have not always been so low, but rather took a dive of fourteen percent between 1991 and 2003.⁸¹ These low levels of P.E. participation would not be nearly so significant if children and adolescents were fulfilling their recommended exercise guidelines through physical activity outside of school. The evidence, however, shows that *en masse*, they are not.⁸² Thus, it appears that decreasing levels of P.E. in schools contributes to the increasingly sedentary lifestyle of American youth, and accordingly, to expanding waistlines.

Research suggests that the quantity and quality of P.E. and school-sponsored physical activity that students engage in differs according to race, which may contribute to the racial gap in childhood obesity. One study found that schools with a high minority population reported offering significantly fewer minutes of P.E. class per week as compared to schools with a high white population.⁸³ Minority students were also more likely to report attending a school without a gymnasium, without a playground, or without an adequate playground.⁸⁴ In addition to engaging in a lower quantity of physical education, African-American, and Hispanic students also receive lower quality P.E. classes involving less vigorous exercise compared with their white counterparts.⁸⁵ The disparities do not end with the final bell of the school day; minority students attend schools in which fewer students are involved in school sports teams.⁸⁶ Thus, the opportunities for school-sponsored physical activity and the quality of that physical activity vary along racial lines, suggesting that this is one source of the racial gap in youth adiposity.⁸⁷

Research also indicates, however, that schools may not be the most important contributor to the racial gap. Significantly, “[a] study of 5,380 kindergartners and first-graders published . . . in the American Journal of Public Health found that children gained more weight during the summer than they did during the school year.”⁸⁸ This indicates that even if school-based causes do contribute to childhood obesity and overweight, they are not the most influential contributors. It suggests that family-based or neighborhood-based causes may be of more significance than school-based causes. Additionally, studies have shown that the racial gap already exists in measurable quantities by the age of three.⁸⁹ As most children do not attend school regularly until

⁸⁰ Centers for Disease Control and Prevention, *SHPPS 2006: School Health Policy and Program Study*, http://www.cdc.gov/HealthyYouth/shpps/2006/factsheets/pdf/FS_PhysicalEducation_SHPPS2006.pdf.

⁸¹ CDC, *Factors*, *supra* note 50.

⁸² *Id.* (“[L]ess than one-third (28%) of high school students meet currently recommended levels of physical activity.”).

⁸³ Meenakshi Fernandes & Roland Sturm, *Facility Provision in Elementary Schools: Correlates with Physical Education, Recess, and Obesity*, 50 PREVENTATIVE MED. s30, s33 (2010).

⁸⁴ *Id.* at s32.

⁸⁵ James F. Sallis et al., *Ethnic, Socioeconomic, and Sex Differences in Physical Activity Among Adolescents*, 49 J. CLINICAL EPIDEMIOLOGY 125, 130 (1996).

⁸⁶ *Unhealthy Pressures*, *supra* note 52.

⁸⁷ Anecdotal evidence seems to suggest that these disparities are increasing as a result of No Child Left Behind. See discussion *infra* Part IV.C.

⁸⁸ Editorial, *Kids Encouraged to Exercise; Loans Fund Gastric Bypass*, AM. HEALTH LINE, June 25, 2008, at 1 (discussing Paul T von Hippel et al., *The Effect of School on Overweight in Childhood: Gain in Body Mass Index During the School Year and During Summer Vacation*, 97 AM. J. PUB. HEALTH 696 (2007)).

⁸⁹ *Pediatric Obesity*, *supra* note 41.

five or six years old, this further challenges the theory that school-based contributors fully explain the racial gap. Nevertheless, school-based causes are well documented and may be important in crafting effective legislative responses to childhood overweight and obesity in communities of color.

B. Neighborhood-Based Causes and Contributors

Research suggests that neighborhood-based causes contribute to the racial gap in childhood obesity. Most Americans live in racially homogeneous neighborhoods.⁹⁰ In fact, evidence indicates that in the last quarter of the twenty-first century, distinct racial and ethnic groups became more, not less, residentially segregated in some American cities.⁹¹ As one might expect, these separate neighborhoods are not equal in many respects. Two discernable disparities—differences in food access and built environment—have been linked to obesity and overweight.

1. Food Access

Food availability and access has been shown to influence food choices and consumption patterns. Several studies have demonstrated a correlation between proximity to grocery stores and healthy restaurants, and lower incidences of overweight and obesity in both children and adults.⁹² Access to fresh fruits and vegetables has been shown to influence diet and BMI.⁹³ Food availability can also have an unhealthy impact on dietary choices. Research suggests an association between the availability of fast-food stores and convenience stores and increased rates of overweight and obesity in youth.⁹⁴ Children seem especially vulnerable to the impact of food access; unlike adults who may be able to travel by car, bus, or train to other food outlets, children are much more constrained in their mobility and hence in their food choice.

Food availability varies greatly between neighborhoods along both socioeconomic and racial lines. For instance,

high-income neighborhoods have a significantly lower proportion of fast-food restaurants than do lower-income neighborhoods. There are also racial disparities: predominately African-American urban neighborhoods have a significantly higher proportion of fast-food restaurants out of total restaurants compared with predominately white urban neighborhoods.⁹⁵

Corresponding differences in access to grocery stores and healthy food outlets have also been

⁹⁰ William Booth, *One Nation Indivisible: Is it History?*, WASH. POST, Feb. 22, 1998 at A1.

⁹¹ *Id.*

⁹² See Andrew Rundle et al., *Neighborhood Food Environment and Walkability Predict Obesity in New York City*, 117 ENVTL. HEALTH PERSPECTIVES 442, 442 (2009) (“Proximity to supermarkets has been positively associated with consumption of a healthy diet and negatively associated with overweight or obesity.”); see also *Unhealthy Pressures*, *supra* note 52 (“UIC economist Lisa Powell found a statistically significant association between the availability of supermarkets and lower adolescent and overweight status.”).

⁹³ See Rundle et al., *supra* note 92; but see Navarro, *supra* note 4, at 384-85 (suggesting that access to health food alone has no impact on food choices among minority populations if the healthier choices are cost prohibitive).

⁹⁴ *Unhealthy Pressures*, *supra* note 52.

⁹⁵ *Id.*

noted. Predominately African-American or Hispanic neighborhoods had lower levels of “BMI-health food outlets” per capita as compared to white neighborhoods.⁹⁶ In sum, “[b]ecause food availability influences consumption, less wealthy minority neighborhoods are at a distinct disadvantage regarding food choice.”⁹⁷ Food access is strongly indicated among contributing factors associated with racial disparities in childhood overweight and obesity.⁹⁸

2. Built Environment

A second important way that neighborhoods contribute to the racial gap in youth weight status is through the built environment. The phrase “built environment” is used throughout obesity literature to refer to the physical design of a neighborhood which may either encourage or inhibit physical activity.⁹⁹ This term “encompasses, *inter alia*, street layout, zoning, recreation facilities, transportation options, parks, stairs, and public spaces.”¹⁰⁰ Hypothesizing how the built environment affects levels of physical activity and, consequently, weight status is easy. Members of a community with ample public fields, parks and pools, and/or with pedestrian running and bike paths may be more likely to engage in healthy activities because of their proximity to these facilities; by comparison, communities designed without recreational public spaces and/or with narrow sidewalks and frequent intersections may discourage exercise. The impact of the built environment on children may be especially pronounced because their limited mobility and financial resources inhibit their ability to seek out alternative public or private venues for exercise and recreation. In addition to the obstacles presented by a neighborhood’s physical structures, children may also be deterred from engaging in exercise and play outdoors for fear of traffic hazards¹⁰¹ and/or neighborhood violence.

Studies support the conclusion that the built environment affects weight status. An article published in the *Journal of the American Medical Association* concluded that “[e]mpirical evidence now suggests an association between these design elements and physical activity, which is related to overweight and obesity.”¹⁰² Additionally, the CDC reports that its research “has also indicated that two of the main reasons given as reasons for not exercising are lack of structures or facilities (such as sidewalks and parks) and fears about safety.”¹⁰³ Conversely, higher levels of community safety are positively associated with higher levels of physical activity.¹⁰⁴

Further, studies report disparities in the built environment between predominantly minority neighborhoods and largely white neighborhoods. Minority communities have fewer parks, fewer playgrounds and other recreational facilities, and higher levels of violence, than do

⁹⁶ See Rundle et al., *supra* note 92, at 444-45.

⁹⁷ Lee, *supra* note 48, at 511.

⁹⁸ Rundle et al., *supra* note 92, at 445.

⁹⁹ Hayne et al., *supra* note 58, at 399.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* (reporting that pedestrians account for 12% of all traffic fatalities).

¹⁰² *Id.*

¹⁰³ Richard J. Jackson & Chris Kochitzky, *Creating a Healthy Environment: The Impact of the Built Environment on Public Health*, SPRAWL WATCH CLEARINGHOUSE MONOGRAPH SERIES, 8 available at <http://www.sprawlwatch.org/health.pdf> (citing Russell R. Pate et al., *Physical Activity and Public Health: A Recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine*, 273 JAMA 402, 402-07 (1995)).

¹⁰⁴ *Id.*

white communities.¹⁰⁵ A study of the barriers to physical activity among women of different races found that a greater percentage of African-American women, as compared to white women, reported high levels of crime, heavy traffic and feeling unsafe exercising in their neighborhoods; moreover, a smaller percentage reported enjoyable scenery and seeing others exercise with frequency.¹⁰⁶ Given that most children live with their mothers or a female relative, the racial disparities reported by women likely reflect the reality of children as well. Taken together, the disparities in neighborhood amenities, and the correlation between the built environment and weight status, suggest that the built environment may be an important neighborhood-based contributor to the racial disparities in childhood weight status.

C. Family-Based Causes and Contributors

Many believe that parents and families are largely, or even exclusively, to blame for childhood obesity. The family unit is perhaps the single most influential entity in a child's life. Children spend more time at home than anywhere else, and consume most of their calories in their home or with their family. Families and parents, therefore, have great access to and influence over many behavioral factors that influence weight status, including eating habits, physical activity, sleeping habits, television viewing and breastfeeding as an infant. Some of these family-based contributors to childhood overweight and obesity have a disparate impact on minority populations. Family influence on eating habits and television viewing may help to explain the racial gap in youth weight status, and thus deserves more particularized attention.

1. Parental Influence on Eating Habits

The theory that families and parents have the ability to strongly influence the consumption patterns of a child is supported by several studies. Caretakers can influence a child's eating habits in many ways, including through the monitoring of food choice, soda and beverage intake, frequency of meals, and regularity of meal times. The effect familial monitoring can have on a child's weight status is complex; research has confirmed that parental oversight of consumption habits can decrease a child's likelihood of becoming overweight or obese. For example, consuming sugary beverages, such as soda, and skipping breakfast have been linked to childhood obesity.¹⁰⁷ Theoretically, both of these behaviors should be within the scope of familial control and susceptible to positive parental influence. However, evidence also suggests that parental involvement can have deleterious effects on eating habits and weight status in some unforeseen ways. One might expect that eating dinner as a family would decrease the likelihood of obesity in youth. However, one study found the opposite: "[s]urprisingly, eating dinner

¹⁰⁵ Hayne et al., *supra* note 58, at 399; Lee, *supra* note 48, at 509.

¹⁰⁶ Abby C. King et al., *Personal and Environmental Factors Associated with Physical Inactivity Among Different Racial-Ethnic Groups of U.S. Middle-Aged and Older-Aged Women*, 19 HEALTH PSYCHOL. 354, 359 (2000) (reporting that eighty-one percent of white women reported feeling safe walking or jogging in their neighborhood, as compared to seventy-one percent of black women; thirty-six percent of white women reported heavy traffic, whereas forty-five percent of black women did; eighty-six percent of white women reported enjoyable scenery compared to eighty-two percent of black women; sixty-seven percent of white women see others exercise frequently contrasted with sixty-two percent of black women; and twenty-five percent of black women reported high crime levels in their neighborhoods as compared to only sixteen percent of white women).

¹⁰⁷ See David B. Allison & Richard D. Mattes, *Nutritively Sweetened Beverage Consumption and Obesity: The Need for Solid Evidence on a Fluid Issue*, 301 JAMA 318, 320 (2009); see also Lee, *supra* note 48, at 508.

regularly with parents increased the likelihood of staying obese. Although sharing family meals could be considered a protective mechanism of parental monitoring, it is also a context in which parents may serve as role models for less healthy eating habits.”¹⁰⁸ Clearly, family environment and parental oversight have the ability to impact a child’s weight for better or for worse.

Familial influence over eating habits may contribute to the racial gap in childhood obesity. Research has identified a strong intergenerational influence of parental obesity.¹⁰⁹ Both boys and girls are more likely to become obese as children and remain obese into adulthood if their parents were obese.¹¹⁰ Like the study involving family dinners discussed above, one explanation for this association is that obese parents model unhealthy eating habits and pass them on to their children. A recent study published in the *Archives of Pediatrics & Adolescent Medicine* found that children of mothers who are overweight have less self-control around food.¹¹¹ Because a greater percentage of African-American and Hispanic adults are overweight and obese than white adults, the intergenerational effect obesity has on eating habits will be greater on minority children. Thus, parental role-modeling of eating habits is likely one contributor to the racial gap in youth weight status.

Research also suggests that minority parents would have a less positive influence on their children’s consumption patterns. One study found that children of color “were less likely than white children to eat meals at the same time daily.”¹¹² Because skipping meals has been associated with an increased risk of childhood obesity,¹¹³ minority parents may be foregoing an opportunity to instill healthy behaviors in their children. Evidence also suggests that higher rates of stress and time constraints on working parents may inhibit parental monitoring of diet choices.¹¹⁴ Finally, breastfeeding as an infant has been associated with preventing overweight and obesity in adolescence.¹¹⁵ According to the CDC, only 54.4% of African-American mothers initiated breastfeeding as compared to 74.3% of white mothers and 80.4% of Hispanic mothers.¹¹⁶ Taken together, the evidence indicates that one of the family-based contributors to racially disparate rates of childhood overweight and obesity is differing parental influence over children’s eating habits.

It has also been suggested that minority parents may contribute to the racial gap by

¹⁰⁸ Lee, *supra* note 48, at 523.

¹⁰⁹ *Id.* at 517.

¹¹⁰ *Id.*; see also Jeanne Van Cleave, Steven L. Gortmaker & James M. Perrin, *Dynamics of Obesity and Chronic Health Conditions Among Children and Youth*, 303 JAMA 623, 627 (2010) (finding an association between maternal obesity and child obesity).

¹¹¹ Anderson & Whitaker, *supra* note 40.

¹¹² Glenn Flores et al., *Does Disadvantage Start at Home? Racial and Ethnic Disparities in Health-Related Early Childhood Home Routines and Safety Practices*, 159 ARCHIVES PEDIATRIC & ADOLESCENT MED. 158, 159 (2005).

¹¹³ Berthold Koletzko & Andre Michael Toschke, *Meal Patterns and Frequencies: Do they Affect Body Weight in Children and Adolescents?*, 50 CRITICAL REV. FOOD SCI. & NUTRITION 100, 100 (2010).

¹¹⁴ See Lee, *supra* note 48, at 510. The study found this obstacle with regard to parents of lower socioeconomic status (“SES”). Because race and SES are so closely associated, minority parents are more likely to experience these inhibitors as a group.

¹¹⁵ Matthew W. Gillman et al., *Risk of Overweight Among Adolescents Who Were Breastfed as Infants*, 285 JAMA 2461, 2466 (2001).

¹¹⁶ Centers for Disease Control and Prevention, *Racial and Ethnic Differences in Breastfeeding Initiation and Duration by State – National Immunization Survey, United States, 2004 – 2008*, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5911a2.htm> (last viewed Nov. 22, 2010).

instilling in their children different cultural preferences with regard to food and/or body-size. The prevalence of obesity and overweight among communities of color has led some to theorize that these communities are more accepting of overweight figures.¹¹⁷ Research into this hypothesis has been inconclusive. While some studies conclude that African-American women are less dissatisfied with their body-size as compared to white women and perceive themselves to be thinner than they in fact are, other studies have shown no difference in attitudes, perception, or body-size preferences along racial or ethnic lines.¹¹⁸ While further research is needed to establish the existence of disparate cultural body-size preferences, it does appear that perception of childhood overweight varies according to race. A study published in *Obesity* reported that “[a]fter controlling for parent BMI, African-American parents were twice as likely to underestimate the weight of their overweight child compared with white parents.”¹¹⁹ The same study also found that neither socio-economic status nor parental education was associated with accurate perceptions.¹²⁰ Additional research is also required to understand the influence of ethnicity or race on food preferences. One study showed that mothers tend not to offer foods they dislike to their children, and that mothers’ and children’s food preferences are moderately related.¹²¹ This suggests that mothers will in fact pass cultural food preferences on to their children. However, what those cultural food preferences are, and how they influence adiposity, is not yet fully understood.

2. Television Viewing and Media Exposure

Across the United States, children view a shocking amount of television and media on a daily basis. A recent study conducted by the Kaiser Family Foundation (“KFF”) reported that on an average day, children and adolescents between the ages of eight and eighteen spent nearly four and a half hours watching T.V.¹²² When other forms of media are taken into account, such as music, internet, video games, and movies, this number increases to ten hours and forty-five minutes per day.¹²³ Given these high levels of television viewing and media exposure, it is not surprising that many have suggested television and media may be contributing to the rise in childhood obesity.¹²⁴

Television viewing has in fact been linked to obesity and overweight in children. One study found that “boys and girls with greater BMIs and trunk skinfolds were more likely to report

¹¹⁷ See generally, Fary M. Cachelin et al., *Does Ethnicity Influence Body-Size Preference? A comparison of Body Image and Body Size*, 10 OBESITY RESEARCH 158 (2002).

¹¹⁸ *Id.*

¹¹⁹ Delia S. West et al., *Parental Recognition of Overweight in School-Age Children*, 16 OBESITY 630, 633 (2008).

¹²⁰ *Id.* (“Parental education was not associated with the accuracy of child weight perception, nor was participation in the federal-free and reduced-lunch program.”).

¹²¹ Jean D. Skinner et al., *Children’s Food Preferences: A longitudinal Analysis*, 102 J. AM. DIETETIC ASS’N 1638, 1638 (2002).

¹²² *Generation M2: Media in the Lives of 8 to 18-year-olds*, KAISER FAMILY FOUND. (2010), available at <http://facts.kff.org/chart.aspx?ch=1351> [hereinafter KFF].

¹²³ *Id.*

¹²⁴ See, e.g., Roni Caryn Rabin, *TV Ads Contribute to Childhood Obesity, Economists Say*, N.Y. TIMES, Nov. 20, 2008, <http://www.nytimes.com/2008/11/21/health/research/21obesity.html>.

watching more television.”¹²⁵ Television has been shown to impact youth weight status in two ways: by contributing to sedentary lifestyles and supplanting physical activity, and by influencing dietary choices and food consumption in response to viewed advertisements.¹²⁶ It appears that both of these mechanisms contribute to the obesity epidemic: “[t]here is some evidence that children who watch more television are less physically active . . . [and] there is evidence that adolescents who watch more television eat higher-fat diets and that high-calorie food advertisements influence children’s snack choices and consumption.”¹²⁷ The Institute of Medicine (“IOM”) reported that advertising is particularly influential among youths because they are unable to understand the persuasive content of the ads they view.¹²⁸ Given the control caretakers have over television viewing, this may be another important family-based contributor to the epidemic of childhood obesity.

Companies marketing food are aware of children’s developmental inability to understand persuasive content in television advertisements and spend significant sums of money specifically targeting this vulnerability.¹²⁹ Evidence shows that “American children are exposed to 40,000 advertisements per year, of which 72% are for candy, cereal, and fast-food.”¹³⁰ The food and beverage industries spend eleven billion dollars on advertising and twenty-two billion more on consumer promotions ever year.¹³¹ Researchers reported that “[i]n 2006, major food and beverage marketers spent \$1.6 billion to promote food and beverage products among children and adolescents in the United States.”¹³² The food and beverage industries spend billions marketing to children because they realize one simple fact—children change their consumption patterns in response to television advertising.

Levels of television viewing and media exposure are far from equal across youth of different racial backgrounds. For instance, one report found that non-Hispanic black boys and girls were nearly twice as likely to report watching four or more hours of television a day as compared to the general population.¹³³ Furthermore, the KFF report found that white children averaged just over eight hours of media exposure a day, while African-American and Hispanic children averaged thirteen hours per day.¹³⁴ These disparate rates of television and media exposure suggest that the impact television has on weight status would be greater among minority populations. This may be especially true given the insidious marketing techniques used by the

¹²⁵ Robinson, *supra* note 54, at 959.

¹²⁶ *Id.* at 960.

¹²⁷ *Id.* See also Marion Nestle, *Food Marketing and Childhood Obesity – A Matter of Policy*, 354 NEW ENG. J. MED. 2527, 2528 (2006) (“[T]he IOM analyzes the results of 123 published, peer-reviewed studies addressing links between food marketing and children’s preferences, requests, consumption and adiposity . . . the IOM finds that the preponderance of evidence supports the links. Marketing strongly influences children’s food preferences, requests, and consumption.”).

¹²⁸ Loeb, *supra* note 14, at 309.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ Hayne et al., *supra* note 58, at 395.

¹³² Laura Kettle Kahn et al., *Recommended Community Strategies and Measurements to Prevent Obesity in the United States*, CENTER FOR DISEASE CONTROL (July 24, 2009), <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm>.

¹³³ Robinson, *supra* note 54, at 959.

¹³⁴ KFF, *supra* note 122 (finding higher rates of increase over the last ten years among African-American and Hispanic children in addition to higher rates of use).

industry, including

the ‘imbalance’ in the content that minority and low-income children are being exposed to via media. A telling example is that television programs that primarily feature African Americans show more food commercials for high caloric foods than general prime time television does. Similarly . . . [a] content analysis of movies showed a prevalence of stereotypical food-related behaviors with respect to body shape, gender, and ethnic background.¹³⁵

Different rates of television viewing between children of different racial backgrounds, in combination with racially-targeted food marketing, appears to contribute to the racial gap in childhood overweight and obesity.

IV. LEGISLATIVE RESPONSES TO THE OBESITY EPIDEMIC—THE THREE APPROACHES MOST LIKELY TO AFFECT CHILDREN OF COLOR

The rise in the number of overweight and obese Americans has not gone unnoticed. Politicians at the federal, state, and municipal level have proposed a wide variety of legislation aimed at turning the tide on the mounting obesity epidemic. These legislative proposals run the gamut, “from silly to serious.”¹³⁶ One legislator even went so far as to propose that restaurants be banned from serving obese diners.¹³⁷ All silliness aside, Congress, state legislatures, and local municipalities have considered, and in many cases adopted, an array of legislation aimed at curbing increasing rates of obesity.¹³⁸ Some of the remedies considered or adopted include school BMI reporting,¹³⁹ state task forces,¹⁴⁰ local wellness policies,¹⁴¹ changes to school nutrition,¹⁴² physical education requirements,¹⁴³ menu labeling,¹⁴⁴ zoning changes,¹⁴⁵ the Federal Safe Routes to School Program,¹⁴⁶ food and soda taxes,¹⁴⁷ bans on food marketing,¹⁴⁸ and trans-fat food

¹³⁵ Navarro, *supra* note 4, at 382 (internal footnotes omitted).

¹³⁶ Victoria Stagg Elliott, *States Battle Obesity Epidemic with New Laws*, AM. MED. NEWS, Mar. 24, 2008, <http://ama-assn.org/amednews/2008/03/24/hlsa0324.htm>.

¹³⁷ *Id.*

¹³⁸ AM. ACAD. OF PEDIATRICS, STATE GOVERNMENT AFFAIRS: STATE LEGISLATION REPORT 2009 29 (2010), available at <http://aap.org/advocacy/statelegprpt.pdf> (noting that since 2003, thirty-nine states have enacted some sort of legislation targeted at childhood obesity prevention).

¹³⁹ *Id.* (reporting that since 2003, eight states have enacted legislation which mandates BMI screening in schools).

¹⁴⁰ *Id.* (reporting that since 2003, fourteen states have enacted legislation which establishes a state task force on childhood obesity prevention).

¹⁴¹ Loeb, *supra* note 14 at 296-97.

¹⁴² AM. ACAD. OF PEDIATRICS, *supra* note 138 at 29 (noting that since 2003, twenty-seven states have passed legislation which addresses school nutrition).

¹⁴³ See discussion *infra* Part IV.C.III.

¹⁴⁴ AM. ACAD. OF PEDIATRICS, *supra* note 138 at 28 (noting that in 2009, twenty states introduced legislation that would require nutritional information on the menus of certain restaurants).

¹⁴⁵ See discussion *infra* Part IV.B.III.

¹⁴⁶ For a discussion of this program, see Loeb, *supra* note 14 at 314.

¹⁴⁷ See, e.g., Victoria Stagg Elliott, *States Battle Obesity Epidemic with New Laws*, American Medical

bans.¹⁴⁹ Legislators and academics have been busy fashioning solutions to the obesity epidemic.

Despite the legislative energy that has been focused on obesity, little consideration has been given to minority populations specifically. Of the many legislative proposals described above, some were intended to target the issue of obesity generally, while others were formulated with childhood obesity in mind. Few, if any, of these remedies have been directed at addressing the particularly significant burdens of obesity in minority communities and among minority children. Because tackling the unique causes of adiposity among children of color is not a goal of these proposals, there is reason to doubt what impact these responses will have on reducing or eliminating childhood overweight and obesity in these communities.

In order to effectively reduce the prevalence of obesity among African-American, Hispanic, and American-Indian youth, legislation should be targeted to the causes and contributors which affect these groups in particular. Obesity legislation should not take a one-size-fits-all approach. Instead, legislators should consider the unique contributors driving the higher rates of overweight and obesity among children of color when crafting a legislative response to childhood obesity. Overly general solutions that fail to take into account the empirical research are unlikely to be successful. However, a tailored approach that targets the major causes of disparate obesity rates may have a shot at reducing the rates of overweight and obesity in minority children and adolescents.

As evidenced above, the major causes and contributors to the racial gap can be grouped according to three main sources: schools, neighborhoods, and families. Consequently, an effective method of combating the racial gap must address all of these causes. This article will identify three legislative solutions likely to address these root causes: a ban on television marketing of junk food to children; land-use planning to address food access and built environment concerns; and reform of physical education requirements. The arguments in favor of these particular remedies are laid out below.

A. *Banning Television Marketing of Food to Children*

1. The Current State of the Law

To date, the federal government does not restrict food marketing to children. The Federal Trade Commission ("FTC") is the agency with primary responsibility for regulating the advertising of food and beverages.¹⁵⁰ However, the FTC's authority to regulate food marketing to

News, Mar. 24, 2008 ("New Mexico's Legislature is debating whether to add a 1% tax to the sales of television sets and video game consoles to finance a 'No Child Left Inside' fund that would pay for outdoor education programs. Also, at least 17 states and the District of Columbia have added taxes to soda and junk food.").

¹⁴⁸ See discussion *infra* Part IV.A.III.

¹⁴⁹ See, e.g., Editorial, *AHL Highlights Recent Developments*, American Health Line, Mar. 6, 2008 ("The Baltimore City Council's Public Safety and Health Committee on Tuesday passed a bill that would ban trans fats from restaurants, the Baltimore Sun reports. The committee approved the bill by a 3-0 vote. It will face two more votes by the full council before final approval."); Loeb, *supra* note 14 at 311 ("New York City, for example, has banned restaurants from preparing recipes with more than 0.5 grams of trans fat per serving because trans fat has been identified as 'the worst type of fat.' Similar measures were adopted in Philadelphia, Boston, and California. Several states, including California, New Jersey, and Oregon, have recently prohibited trans fat use in school foods.").

¹⁵⁰ Jennifer L. Pomeranz & Lawrence O. Gostin, Symposium, *Proceedings of the National Summit on Legal Preparedness for Obesity Prevention and Control: Improving Laws and Legal Authorities for Obesity Prevention and Control*, 37 J.L. MED. & ETHICS 62, 63 (2009).

children is currently limited. In 1978, the FTC attempted to use its authority under the Federal Trade Commission Act,¹⁵¹ which prohibits “unfair and deceptive acts or practices,” to ban the advertisement of sugary foods to children under the age of eleven.¹⁵² The FTC staff began by conducting an investigation culminating in a report to the Commission concluding that:

[T]here was sufficient evidence to suggest that both (1) the televised advertising of any product directed to children too young to understand the selling purpose of, or otherwise comprehend or evaluate commercials and (2) the televised advertising of sugared products to children of all ages may be unfair and deceptive within the meaning of section 5 of the FTC Act, thus requiring an appropriate remedy.¹⁵³

Pursuant to this report, the FTC initiated a comprehensive rulemaking process.¹⁵⁴ This endeavor, known as KidVid, was a political debacle. Bowing to political pressure, Congress enacted the FTC Improvements Act of 1980 which withdrew the FTC’s authority to regulate televised advertising to children under the “unfair” prong of the FTC Act.¹⁵⁵ While the agency retains the authority to regulate under the “deceptive” prong of the Act, it has not yet done so.¹⁵⁶

The Federal Communications Commission (“FCC”) has also declined to regulate televised food advertising to children and adolescents. In 1990, Congress enacted the Children’s Television Act (“CTA”).¹⁵⁷ The CTA directed the FCC to “prescribe standards applicable to commercial television broadcast licensees with respect to the time devoted to commercial matter in conjunction with children’s television programming.”¹⁵⁸ Under the CTA, the FCC has limited the amount of television advertising permitted during children’s television programming, but has not limited its content.¹⁵⁹ The FCC has declined to regulate content, explaining that the FTC has more expertise in the area of deceptive or unfair marketing practices.¹⁶⁰

¹⁵¹ 15 U.S.C. §§ 41-58 (2006).

¹⁵² Jennifer L. Harris, Jennifer L. Pomeranz, Tim Lobstein & Kelly D. Brownwell, *A Crisis in the Marketplace: How Food Marketing Contributes to Childhood Obesity and What Can Be Done*, 30 ANN. REV. PUB. HEALTH 211, 220 (2009). “This rulemaking proceeding was initiated in response to petitions filed in 1977 by Action for Children’s Television (ACT) and Center for Science in the Public Interest (CSPI), and a third petition filed in 1978 by Consumers Union of the United States, Inc. (CU) and Committee on Children’s Television, Inc.” FTC Children’s Advertising, 16 C.F.R. § 461 (1981).

¹⁵³ 16 C.F.R. § 461(1981).

¹⁵⁴ *Id.*

¹⁵⁵ *Id.* (“In addition, the Act provided that the rulemaking could not be continued unless the Commission published ‘the text of the rule, including any alternatives, which the Commission proposes to promulgate,’ and allowed public comment on the text.”).

¹⁵⁶ Pomeranz, *supra* note 150, at 63. Following the FTC Improvements Act of 1980, the FTC abandoned its efforts to regulate children’s advertising. The Commission cited several reasons including: inconclusive research as to the effects of advertising on young children today; the financial and institutional resources necessary to conduct an appropriate investigation and rulemaking hearing; and the difficulty of defining a rule that is not both underinclusive and overinclusive. 16 C.F.R. § 461 (1981).

¹⁵⁷ Children’s Television Act of 1990, Pub. L. No. 101-437, 104 Stat. 996 (1990).

¹⁵⁸ *Id.* at 102(b). See Nicki Kennedy, Comment, *Stop in the Name of Public Policy: Limiting ‘Junk Food’ Advertising During Children’s Programming*, 16 COMMLAW CONSPECTUS 503, 514 (2008).

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

The current administrative approach to food and beverage advertising on television is to encourage the food and beverage industries to self-regulate.¹⁶¹ The industry appears receptive to the call for self-regulation.¹⁶² In 2006, several major food companies joined together with the Council of Better Business Bureaus to form the Children's Food and Beverage Advertising Initiative ("Initiative").¹⁶³ Members of the Initiative publicly pledged to voluntarily improve the nutritional profile of food and beverages marketed to children.¹⁶⁴ The Initiative did not promulgate any uniform standards for increasing the nutritive value of foods advertised to children and companies were allowed to set their own guidelines.¹⁶⁵ Given that standards differ by company, self-regulation does not have an industry-wide impact. If self-regulation does occur, it happens only at the corporate level through internal self-monitoring.

2. Why the Current State of the Law is Inadequate

With respect to childhood obesity, industry self-regulation has been a resounding failure. Government regulation of food marketing to children is necessary in order to combat overweight and obesity among minority youth for several reasons. First, as described in detail above, food marketing to children has an insidious effect on their diet. Numerous studies demonstrate that the advertisements children view on television impact their food preferences, requests, and consumption.¹⁶⁶ Part of this is no doubt due to the cognitive limitations of children. Developmentally, many children and adolescents are unable to grasp the persuasive content of food advertisements and so are especially susceptible to their influence; records subpoenaed by the CDC indicate that major food and beverage companies are aware of this vulnerability and exploit it for pecuniary gain.¹⁶⁷ One researcher concluded that telling children that certain foods are "just for them . . . explicitly attempt[s] to undermine family decisions about food choices by convincing children that they, not adults, should control those choices."¹⁶⁸ Given the calculated techniques employed by food marketers, it would be futile to rely upon the industry to reverse course and begin protecting children by shielding them from manipulative and effective marketing. Rather, this function must fall to government regulation.¹⁶⁹

¹⁶¹ Loeb, *supra* note 14, at 309-10.

¹⁶² See Harris, *supra* note 152, at 217 (suggesting that the industry's efforts to self-police are merely a means of avoiding stricter government regulation and/or a way to offset negative publicity).

¹⁶³ DALE KUNKEL, CHRISTOPHER MCKINLEY & PAUL WRIGHT, CHILDREN NOW, THE IMPACT OF INDUSTRY SELF-REGULATION ON THE NUTRITIONAL QUALITY OF FOODS ADVERTISED ON TELEVISION TO CHILDREN 11 (2009), www.childrennow.org/uploads/documents/adstudy_2009.pdf (identifying 16 companies participating in the initiative).

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 5.

¹⁶⁶ See discussion *supra* Part III.C.II.

¹⁶⁷ Pomeranz, *supra* note 150, at 63 ("[T]he American Psychological Association's Task Force on Advertising and Children found that '[c]hildren below age 7-8 years tend to accept commercial claims and appeals as truthful and accurate because they fail to comprehend the advertiser's motive to exaggerate and embellish.' Even for older children, newer forms of marketing, including product placements, viral marketing, and sponsorships deactivate their ability to process advertising information, thereby reducing potential skepticism and other defenses.")

¹⁶⁸ Nestle, *supra* note 127, at 2528.

¹⁶⁹ Parents alone cannot shield their children from the entirety of food marketing available. As U.S. Rep. Edward Markey (D-Mass.) put it, "[m]ost parents are not in the position to control what kids see—they are both working. While these kids have all these unhealthy choices presented to them in the media . . . I'm prepared to press the FCC to put on the books rules to protect kids from unhealthy messages." Susan Linn & Courtney L. Novosat, *Calories for Sale: Food*

Governmental regulation of food marketing is warranted because self-policing by the industry is insufficient. A major study of the Children's Food and Beverage Advertising Initiative found that the Initiative had a limited, albeit positive, effect on food advertising to children—between 2005 and 2009, there was approximately a twelve-point decrease in the marketing of very low quality food compared to food marketing overall, and a corresponding twelve-point increase in the marketing of moderately nutritional food compared to marketing overall.¹⁷⁰ Despite this positive shift, the study concluded that levels of televised advertising of junk food are still intolerably high:

Despite industry claims that food marketing to children would be limited to healthier products through the initiative . . . more than two-thirds (68.5%) of all advertising by participating companies is for foods and beverages in . . . the lowest category of nutritional quality . . . products [that] should be consumed only on 'special occasions, such as your birthday.' Roughly one-third (31%) of the food ads from companies participating in the initiative are for . . . products, which have moderate nutritional value but should be consumed only 'sometimes, at most several times a week.' Healthy food advertising is invisible. Ads for truly healthy . . . products, such as vegetables, fruits, whole grain breads and other products that can be consumed 'anytime,' account for less than 1% of all advertising from participating companies.¹⁷¹

Self-regulation has produced marginal and inadequate changes in food marketing to children and adolescents. If a more radical transformation in televised advertising to youth is going to occur, it will have to come from governmental regulation and not the self-policing of the food and beverage industry.¹⁷²

Finally, food marketing is one of the important family-based contributors to racially disparate rates of childhood overweight and obesity.¹⁷³ African-American and Hispanic children view more hours of television per day as compared to white children, and so are exposed to more food advertisements.¹⁷⁴ Even if rates of television viewing were equal across races, minority children would still be exposed to more advertisements for soda and junk food because of the racial profiling used by food and beverage marketers.¹⁷⁵ In order to effectively address childhood overweight and obesity among minority populations, the disproportionate effect of television

Marketing to Children in the Twenty-First Century, 615 ANNALS 133, 149 (2008) (quoting *Images Kids See on the Screen* before the Subcom. on Telecomms. and the Internet of the H. Comm. on Energy and Com., 110th Cong. (2007)).

¹⁷⁰ Kunkel, *supra* note 163, at 26.

¹⁷¹ *Id.* at 6.

¹⁷² Carmen Stitt & Dale Kunkel, *Food Advertising During Children's Television Programming on Broadcast and Cable Channels*, 23 HEALTH COMM. 573, 583 (2008) (noting that in 2006 the IOM concluded that the industry should be given two years to simultaneously reduce advertising of nutritionally poor food and increase advertising of health foods, but that if voluntary efforts fell short, Congress should adopt legislation mandating regulation).

¹⁷³ *But cf.* Todd J. Zywicki, Debra Holt & Maureen K. Ohlhausen, *Obesity and Advertising Policy*, 12 GEO. MASON L. REV. 979, 993 (2004) (arguing that children are watching less, not more television today as compared to twenty years ago).

¹⁷⁴ See discussion *supra* Part III.C.II.

¹⁷⁵ The disturbing racial profiling engaged in by the food and beverage industry illuminates the need for governmental intervention. See discussion *supra* Part III.C.II.

junk-food marketing on these groups must be addressed. Although Congress cannot enter into every child's home and turn off the television, Congress can do something to effectively address the problem: eliminate junk-food advertising to children. By banning television advertising of unhealthy food and beverages to children, Congress would greatly reduce the corrosive effect of food marketing on youth, particularly among African-Americans, American-Indians, and Hispanics.

3. Proposed Solutions and Potential Obstacles

Scholars, advocacy groups, and legislators alike have all propounded proposals for increased federal regulation of food and beverage marketing to children. All of these stakeholders agree that Congress has the power to prohibit deceptive or misleading advertising.¹⁷⁶ Because children and adolescents are unable to fully appreciate the persuasive content of advertisements, marketing practices that would be considered harmless when targeted at adults assume a deceptive character when aimed at youth. Accordingly, Congress and various administrative agencies have the authority to regulate such misleading food and beverage advertisements to children.

Despite this foundation of agreement, stakeholders diverge as to which regulatory agency would best assume authority over this venture. It has been suggested that marketing of sugary cereals, sodas, fast-food and other junk food could be restricted by giving a mandate to the FCC, the FTC, or even the Department of Commerce.¹⁷⁷ Although a Congressional mandate vested in either the FTC or the FCC could be effective, the latter is a superior choice for several reasons. The FCC already regulates children's television and advertising under the CTA, so regulating the content of those advertisements would be a natural extension.¹⁷⁸ Also, unlike the FTC, Congress does not need to repeal any earlier legislation in order to give the FCC the authority required to institute a ban on junk food marketing.¹⁷⁹ One final reason that the FCC may be preferable is that the agency has already expressed some interest in the matter. A portion of the FCC's website is delegated to the issue of "Media & Childhood Obesity," and beginning in 2006, the FCC participated in a task force on the issue, suggesting the FCC's willingness to become involved in fighting childhood obesity through regulation.¹⁸⁰ Conversely, the FTC appears to have a long institutional memory of the KidVid fiasco and has resisted appeals to once again become involved in regulating food and beverage marketing to children.¹⁸¹

A ban on television advertising of nutritionally poor food to children will encounter

¹⁷⁶ Rachel I. Weiss & Jason A. Smith, *Legislative Approaches to the Obesity Epidemic*, 25 J. PUB. HEALTH POLICY 382, 383 (2004). For further discussion of the commercial speech doctrine and constitutional objections to such a ban, see *id.* at 383-84.

¹⁷⁷ *Id.* at 383.

¹⁷⁸ See Kennedy, *supra* note 158, and accompanying text.

¹⁷⁹ See Harris, *supra* note 152, and accompanying text. In order to promulgate effective regulations of food and beverage marketing to children, Congress would need to pass legislation repealing, in part, the FTC Improvements Act of 1980, and restoring the ability of the FTC to regulate "unfair" advertising practices. Pomeranz, *supra* note 150, at 65. This may take more time, effort, and political will at the outset than merely issuing a mandate to the FCC.

¹⁸⁰ See Media and Childhood Obesity, FEDERAL COMMUNICATIONS COMMISSION, <http://www.fcc.gov/obesity/Welcome.html> (last visited Dec. 20, 2010).

¹⁸¹ See Federal Trade Commission, *Advertising to Kids and the FTC: A Regulatory Perspective that Advises the Present*, <http://www.ftc.gov/speeches/beales/040802adstokids.pdf>.

several practical obstacles. To begin, it will take considerable political will to motivate Congress to mandate that the FCC promulgate such restrictions. Legislators and members of the public alike have objected to governmental involvement in the obesity epidemic on several grounds, including the notion that obesity is an individual, not a governmental, problem.¹⁸² However, even proponents of this individual responsibility theory should admit that children are different for the purposes of government oversight. Children do not have the same level of autonomy or mental capacity as adults, and thus do not have the same level of responsibility for their choices. Protections that might seem paternalistic if applied to adults are appropriate and justified when employed to protect youth. Supporters of legislation will also, no doubt, have to face significant efforts by the food and beverage industry to protect their vested interests. The anti-obesity lobby has grown considerably in strength and number since the KidVid debacle thirty years ago, and may now have sufficient political clout to challenge these entrenched business interests. Finally, if the popularity surrounding Michelle Obama's "Let's Move" initiative and "Jaime Oliver's Food Revolution" are any indication, popular opinion may have shifted sufficiently that the requisite political will now exists.

Perhaps the greatest potential obstacle to a complete ban on food advertising to children is the constitutional protection of commercial speech. The United States Supreme Court has declared that "[t]he First Amendment . . . protects commercial speech from unwarranted governmental regulation."¹⁸³ Commercial speech, however, enjoys a lesser degree of constitutional protection than other categories of speech.¹⁸⁴ According to the Court in *Central Hudson Gas v. Public Service Commission of New York*, commercial speech that is related to illegal activity or that is deceptive does not warrant constitutional protection, and may be banned.¹⁸⁵ If the speech is neither misleading nor related to illegality, then the state must have a substantial interest in order for restrictions on commercial speech to be upheld.¹⁸⁶ Assuming a substantial interest, the regulation must meet two further criteria in order to be constitutional: (1) the regulation "must directly advance the state interests involved," and (2) the interests must not be "served as well by a more limited restriction on commercial speech."¹⁸⁷ Scholars have fiercely debated the viability of a ban such as the one proposed in this article under the standards established by the Supreme Court in *Central Hudson*.¹⁸⁸

In order to survive constitutional scrutiny, both Congress and the FCC should be mindful of these constitutional standards and craft legislation and regulation in such a way as to meet all of these requirements.¹⁸⁹ To begin, regulation should attempt to frame the covered advertisements as misleading under the *Central Hudson* test by incorporating the findings of studies, such as

¹⁸² See, e.g., Kelly D. Brownwell, et al., *Personal Responsibility and Obesity: A constructive Approach to a Controversial Issue*, 29 HEALTH AFFAIRS 378 (2010) (discussing the role that the concept of personal responsibility has played in social, legal and political responses to the obesity epidemic).

¹⁸³ *Cent. Hudson Gas v. Pub. Serv. Comm'n*, 447 U.S. 557, 561 (1980).

¹⁸⁴ *Id.* at 563.

¹⁸⁵ *Id.* at 563-64.

¹⁸⁶ *Id.* at 564.

¹⁸⁷ *Id.*

¹⁸⁸ See Kennedy, *supra* note 158 (arguing that a ban could pass constitutional muster); but see Lee J. Munger, Comment, *Is Ronald McDonald the Next Joe Camel? Regulating Fast Food Advertisements that Target Children in Light of the American Overweight and Obesity Epidemic*, 3 CONN. PUB. INT. L.J. 390 (2004) (arguing that a ban would not survive *Central Hudson* scrutiny).

¹⁸⁹ See Kennedy, *supra* note 158, at 525-26.

those discussed in Part V(A)(II) above, which conclude that the marketing practices of the food and beverage industry often mislead children. If courts find that such advertisements are deceptive and therefore do not serve to inform the public, the regulated speech would be stripped of all constitutional protection.

However, the constitutionality of regulation should not rely on this claim of deceptive speech alone but should instead be drafted to overcome the other requirements of *Central Hudson* as well. Congress and the FCC should carefully identify the substantial governmental interest at stake. This aspect of *Central Hudson* should not be hard to satisfy; there is compelling evidence that childhood obesity has significant medical and financial repercussions both in youth and in adulthood,¹⁹⁰ but it should nevertheless be explicitly supported in the record.

To pass *Central Hudson* scrutiny, regulators must also demonstrate that the restriction on commercial speech directly advances the state's interest and is no more extensive than necessary to advance that interest.¹⁹¹ Many studies, such as those discussed in Part V(A)(IV) below support the conclusion that a reduction in and/or ban on junk-food advertising to children and adolescents would substantially decrease demand for junk food and decrease levels of obesity. By incorporating such findings into the regulation and/or the record, Congress and the FCC can attempt to show that the limitations on commercial speech directly advance their substantial governmental interest. In order to meet the requirement that restrictions on commercial speech be no more extensive than necessary, regulation should carefully and thoughtfully draw a line between impermissible junk food advertising and permissible health food marketing. Although this line-drawing exercise may be challenging, all regulation has to define the core terms involved with thought and care, and an agency like the FCC should be up to the task. Additionally, the ban should be restricted to children's television networks and children's television programming, so as not to infringe on the permissible marketing of unhealthful food to adults. A ban that extends to adult television shows would likely be struck down as overly broad under *Central Hudson*. By framing regulation with *Central Hudson* in mind, a ban on the televised advertisement of junk food to children should be able to withstand constitutional scrutiny.

Finally, the FCC should consider how a ban on television advertising may push food and beverage marketing toward other media, such as the internet, video games, and movies. Although television is by far the largest source of media exposure among children and adolescents, the FCC should consider regulating food marketing via other mediums and adopt any regulations it deems necessary and consistent with constitutional standards.

4. The Promise of Success

Although empirical research into the effect of an advertising ban on food and beverage consumption among American children is limited, the existing evidence suggests that a ban on televised food marketing could greatly impact the prevalence of childhood overweight and obesity. A mathematical simulation model designed to estimate the possible effects that a ban on food advertising would have on childhood adiposity found that a complete ban on food advertising on TV could reduce the prevalence of childhood obesity in the U.S. by between 2.5 and 6.5 percentage points.¹⁹² With childhood obesity hovering around seventeen percent

¹⁹⁰ See Part I.B and II.D, *supra*, and accompanying notes.

¹⁹¹ *Cent. Hudson Gas*, 447 U.S. at 566.

¹⁹² J. Lennert Veerman, Eduard F. Van Beeck, Jan J. Barendregt & Johan P. Mackenbach, *By How Much Would Limiting TV Food Advertising Reduce Childhood Obesity?*, 19 EUR. J. PUB. HEALTH 365, 367 (2009).

currently, this would amount to a reduction, among obese individuals, of between fifteen and thirty-eight percent.¹⁹³ In addition to reducing obesity, “[o]ne study estimated that a ban on fast-food advertising on children’s television programs could reduce the number of overweight children aged 3-11 years by 18% and the number of overweight adolescents aged 12-18 years by 14%.”¹⁹⁴ Thus it appears that a ban on televised food marketing could have a significant impact on the prevalence of obesity and overweight among African-American, Hispanic and Native-American youth.¹⁹⁵

Another indication of the effectiveness of such a ban on televised marketing is the American experience with tobacco. Tobacco and obesity share many similarities: both threaten the life and health of the American people, and both market in particular to children, minorities, and the poor.¹⁹⁶ Thus, it is not surprising that even the CDC has looked to tobacco as a model for responding to obesity.¹⁹⁷ Studies show that smoking declined as a result of advertising bans on tobacco.¹⁹⁸ This suggests that a ban on junk food advertising to children may cause a similar decline in the prevalence of obesity.

B. Land Use Planning

1. Background on Land Use Planning

Creative land use planning can also be a formidable legislative weapon in fighting childhood obesity among children of color by addressing two of the neighbor-based causes of adiposity in these communities. Regulation of land use in the U.S. mainly falls within the sphere of local governments. Although there are some state and federal rules concerning land use which local governments must comply with, cities and counties control zoning and land use laws within their legal boundaries.¹⁹⁹ Land use regulations vary significantly not just between states, but between counties and cities within states, as a result of this local control.

The modern tendency is to require municipalities to develop comprehensive land use plans, known as “general plans.”²⁰⁰ The purpose of these general plans is to identify goals for future land use and to avoid irrational development.²⁰¹ Comprehensive plans can include broad policy goals as well as more detailed programs and initiatives for implementing these goals. The requirements for such plans vary by state, but many address such topics as housing, safety, conservation, noise, open space, and transportation.²⁰² Many states require that land development

¹⁹³ *Id.*

¹⁹⁴ Kahn et al., *supra* note 132, at 17.

¹⁹⁵ This prediction is buoyed by studies indicating that a reduction in television exposure leads to decreases in BMI, waist circumference and tricep skin fold thickness, even though such studies do not isolate the effect of advertising in particular. *See, e.g., Id.* at 24.

¹⁹⁶ Navarro, *supra* note 4, at 396.

¹⁹⁷ Kahn et al., *supra* note 132, at 17.

¹⁹⁸ *Id.*

¹⁹⁹ LISA M. FELDSTEIN ET AL., GENERAL PLANS AND ZONING: A TOOLKIT FOR BUILDING HEALTHY, VIBRANT COMMUNITIES 3 (2007), <http://www.phlpnet.org/sites/phlpnet.org/files/finalbook.pdf>.

²⁰⁰ *See* Stuart Meck, *The Legislative Requirement that Zoning and Land Use Controls Be Consistent with an Independently Adopted Local Comprehensive Plan: A Model Statute*, 3 WASH. U. J.L. & POL’Y 295, 306 (2000).

²⁰¹ *Id.* at 297.

²⁰² *Id.* at 316.

and land use ordinances be consistent with a municipality's general plan.²⁰³ Thus, comprehensive plans are essential to a city or county's growth and development.

Local governing bodies can control land use through the implementation of zoning laws. Although zoning laws are often complex and diverse, generally speaking,

[z]oning is the division of a community into districts and the application of different requirements in each of those districts. Zoning determines what is permissible to build on a given parcel of land – its height, bulk, location on the parcel, design, and use. Zoning can allow for great or limited flexibility in the type of use allowed in a particular area.²⁰⁴

Traditionally, "use zoning" divided land into districts and then designated each district for a particular use: industrial, commercial, residential, or mixed-use.²⁰⁵ These designations can make use zoning rigid and inflexible. However, other zoning techniques, such as "performance zoning" or "conditional zoning" can provide a greater amount of flexibility. Conditional zoning allows cities or counties to rezone individual tracts of land, designating new or different restrictions on a parcel-by-parcel basis, rather than a district-wide basis.²⁰⁶ Performance zoning allows local governments to supplement other zoning laws by designating performance standards for land use, thus further restricting land use in a given location.²⁰⁷ Through the use of different zoning techniques, cities and counties have the authority and ability to shape local land use.

2. Why Reform of Current Land Use Planning Practices is Necessary

Changes to comprehensive plans and zoning ordinances are necessary to address overweight and obesity amongst African-American, Native-American, and Hispanic youth. As described in detail above, minority children live in neighborhoods with a greater concentration of fast-food restaurants and fewer grocery stores, as compared to white children.²⁰⁸ Lower access to fresh fruits and vegetables and a prevalence of unhealthy food outlets have been linked to childhood adiposity.²⁰⁹ On top of this nutritional disadvantage, predominately minority neighborhoods have fewer parks, fewer playgrounds and other recreational facilities, and higher levels of violence, than do white neighborhoods.²¹⁰ Studies show that the U.S. is becoming increasingly residentially segregated, which suggests that current housing and residency patterns will not automatically correct these disparities.²¹¹ Furthermore, given the relative permanence of a neighborhood's physical structures and facilities, a concerted effort is essential to transform the built environment. Finally, there is no evidence to suggest that unhealthy eating establishments will voluntarily withdraw from minority communities, or that grocery stores will install

²⁰³ *Id.* at 306.

²⁰⁴ Feldstein, *supra* note 199, at 29.

²⁰⁵ Navarro, *supra* note 4 at 399.

²⁰⁶ *Id.*

²⁰⁷ *Id.* at 400.

²⁰⁸ See discussion *supra* Part III.B.I.

²⁰⁹ *Id.*

²¹⁰ See discussion *supra* Part III.B.II.

²¹¹ See discussion *supra* Part III.B.

themselves in neighborhoods they have so far avoided. If the neighborhood-based root causes of adiposity among minority youth are to change, this change will have to come as the result of governmental leadership.

Fortunately, local governments are not powerless to address these neighborhood-level contributors to overweight; counties and municipalities can undertake to correct both the nutritionally toxic environment and the structural barriers to physical activity through amending their general plans and zoning regulations. Local governments are better situated to address these concerns than federal or state governments not only because they have the authority to regulate local land use planning, but also because they are the closest to the problem, allowing them to better understand the needs of their communities. By studying their neighborhoods and soliciting community involvement, local lawmakers can pinpoint specific shortcomings and needs and tailor their land use planning to address these directly.

3. Proposals for Reform

Local governments have the power to amend general plans and zone land use in order to promote and protect public health. The United States Supreme Court has upheld zoning ordinances designed to support public health, safety, and welfare.²¹² Land use planning that bears a rational relationship to these legitimate governmental purposes is a proper exercise of the government's police power.²¹³ Accordingly, scholars, legislators, and even the CDC have concluded that land planning ordinances may be used to combat obesity. In particular, it has been theorized that land use planning, in the form of both zoning and comprehensive plans, could simultaneously address problems of food access and built environment.

Local governments can begin to address built environment and food access concerns through the incorporation of public health goals, programs, and initiatives in their comprehensive plans. With a few notable exceptions, such as hospitals, disaster planning, and sanitation, comprehensive plans have rarely addressed issues of public health.²¹⁴ Depending on state law, this need not be the case. Comprehensive plans could be written to include such broader goals as maximizing walkability, minimizing access to unhealthy food, increasing access to fresh produce, preventing and reducing crime, and improving pedestrian and automobile traffic safety.²¹⁵ More specific initiatives that seek to address the leading racial disparities in built environments that inhibit healthy behaviors could also be incorporated in a general plan. For example, individuals in minority neighborhoods report fewer opportunities for physical activity; a municipality could include a program to increase sidewalk size, create bicycle paths and lanes, and convert vacant lots into parks or playgrounds thereby encouraging physical activity.²¹⁶ An initiative aimed at reviewing new building and restoration plans for ways to decrease crime might also address higher levels of violence in communities of color that discourage exercise outdoors.²¹⁷ Concerns about traffic safety have been noted in the research as further inhibiting physical activity, which could potentially be tackled through amending a general plan to incorporate the goal of increasing

²¹² *Id.*

²¹³ Pomeranz, *supra* note 150, at 66.

²¹⁴ Feldstein, *supra* note 199, at 55-57.

²¹⁵ *See generally id.*

²¹⁶ *See generally id.*

²¹⁷ *See generally id.*

the number of traffic signals, speed bumps, etc.²¹⁸ Municipalities can employ land use planning to combat neighborhood-based causes of childhood obesity by modifying their comprehensive plan to address built environment and food access challenges.

Zoning regulations can also be used to reduce and prevent overweight and obesity by improving access to healthy foods. Local governments can use zoning or conditional zoning in order to improve access to grocery stores, fresh produce, and healthy foods and beverages. For example, a city or county might improve food access by opening all districts up to grocery stores and farmers markets, including residential, commercial, industrial, and mixed-use districts.²¹⁹ A local government could target specific communities through the use of conditional zoning. By rezoning particular tracts of land and opening individual parcels up to use by grocery stores or farmers markets, a city or county may be able to address food access problems in particular neighborhoods. Through re-zoning, local governments can remove barriers to the entry of healthful food establishments into particular neighborhoods. This is a necessary condition precedent to improving access to healthy foods in communities of color. However, it may not be sufficient—more may be required. If a change in zoning laws alone does not result in an influx of grocery stores or farmers markets, municipalities and state governments may need to consider other incentives, such as preferential tax status, building loans or grants, etc.

Local governments can combat the obesity epidemic by using zoning laws to limit access to fast-food restaurants and unhealthy food outlets. This may be done either through use zoning or performance zoning. Use zoning could reduce the availability of unhealthy food by banning fast-food outlets in certain districts, especially residential, commercial, or mixed-use districts.²²⁰ However, less drastic methods such as “zoning the density of fast food outlets through per unit space or through spacing requirements” could also reduce access to unhealthy food outlets.²²¹ By setting performance standards that would effectively exclude or limit the prevalence of fast-food restaurants, performance zoning could also be an effective tool in the fight against overweight and obesity.

4. Potential for Success

While more studies are needed, available research indicates that land use planning can have an impact on eating and exercise habits, thereby affecting childhood obesity. For example, one study found that with every additional grocery store in African-American neighborhoods, there was a corresponding increase of thirty-two percent in the consumption of fruits and vegetables amongst the local population.²²² Another study demonstrated that “increasing the number of supermarkets in underserved neighbor[hood]s (sic) . . . resulted in lower food prices,” thereby increasing access.²²³ Finally, there is some support for the idea that changes to the built environment can lead to increased physical activity among children and adolescents:

Several experts in the fields of planning, transportation, physical activity, and health [while] . . . [r]ecognizing that there are some inconsistent findings . . .

²¹⁸ See generally *id.*

²¹⁹ Pomeranz, *supra* note 150, at 66.

²²⁰ *Id.*

²²¹ *Id.*

²²² Kahn et al., *supra* note 132.

²²³ *Id.*

conclude that (1) areas with mixed land use, greater residential and commercial densities, grid street networks, and sidewalks are associated with more walking, biking, and public transportation usage; and (2) children with access to parks, recreation facilities, and programs are more physically active than children without access.²²⁴

Thus, land use planning is a potentially powerful tool in the battle against childhood obesity.

While land use planning is predominantly the purview of local governments, state and federal legislators may be able to aid local efforts. One of the practical obstacles to success in land use planning is a lack of political initiative at the local level. Although a few municipalities have already undertaken their own efforts like those described above, the vast majority have not. Whatever the impediments to action have been, states can hasten the process of reform by requiring all comprehensive plans to address public health matters while simultaneously mandating that land use ordinances be consistent with general plans. Both states and the federal government should help make the amendment process effective by providing resources, information, and guides to addressing food access and built environment disparities through land use. Finally, attracting more grocery stores and farmers' markets, in addition to making changes to the built environment, may require financial and structural resources well beyond the capacity of most municipalities. Congress and state legislatures should undertake to provide the incentives and finances necessary to help translate innovation in land use planning into real changes to physical landscapes and the actual use of land.

C. Physical Education Requirements

1. The Current State of Physical Education across the United States

Reforming current physical education requirements may increase physical activity among children and lead to a decrease in overweight and obesity; given the racial disparities in the quality and quantity of physical education, federal regulation of P.E. would address one of the school-based contributors to the racial gap. Physical education standards and requirements are currently regulated almost exclusively at the state or district level. Although organized P.E. classes first developed "during World War I in response to federal legislation requiring the improvement of physical education in schools,"²²⁵ since that time, the federal government has left physical education standards mostly to state and local governments.²²⁶ However, both the executive and legislative branches of the federal government have been involved in offering financial and informational support for state and local policymakers. The President's Council on Physical Fitness and Sport is involved in developing and disseminating resources pertaining to physical activity, including programs to be used in P.E. classes.²²⁷ The CDC and the U.S. Department of Education offer financial assistance to state and local health agencies and

²²⁴ Amy Hillier, *Childhood Overweight and the Built Environment: Making Technology Part of the Solution Rather than Part of the Problem*, 615 ANNALS 56, 58-59 (2008).

²²⁵ Breighanne Aileen Fisher, Comment, *Community-Based Efforts at Reducing America's Childhood Obesity Epidemic: Federal Lawmakers Must Weigh In*, 55 DEPAUL L. REV. 711, 719 (2006).

²²⁶ Sarah M. Lee et al., *Physical Education and Physical Activity: Results from the School Health Policies and Programs Study 2006*, 77 J. SCH. HEALTH 435, 437 (2007).

²²⁷ *Id.*

community organizations to improve and expand physical education.²²⁸ Thus, the federal government plays a supporting role in the regulation of physical education.

Requirements for quantity and quality of physical education vary by state, and sometimes within states. The CDC reports that the amount of P.E. mandated fluctuates greatly by state:

Many states mandate some level of PE in schools: 36 states mandate PE for elementary-school students, 33 states mandate PE for middle-school students, and 42 states mandate PE for high-school students. However, to what extent these requirements are enforced is unclear, and only two states (Louisiana and New Jersey) mandate the recommended >150 minutes per week of PE classes.²²⁹

A minority of states do not appear to require any physical education whatsoever, whereas a few mandate the entire recommended amount; most states fall somewhere between these two extremes, requiring some quantity of P.E. that falls short of recommended levels. The extent to which those states mandating P.E. support monitor and enforce these requirements also varies. Recent data collected by the CDC reveals that thirty-two states offer some form of professional development for P.E. teachers, twenty states include P.E. when conducting onsite school reviews for compliance with educational standards, thirteen states require written reports from school districts documenting compliance with P.E. requirements, and only three states include P.E. as part of statewide testing.²³⁰ P.E. requirements and enforcement do not just differ between states; there is also substantial variation within states. For example, the CDC reported that some local school districts have chosen to implement higher standards and enforcement mechanisms than required by state law, while other districts fail to comply with even the minimal requirements of their state.²³¹ Thus, the quality and quantity standards for P.E. vary significantly between and within states.

Legislative efforts to increase the quantity and improve the quality of P.E. also differ along state lines. Since 2003, as many as twenty-seven states have enacted legislation meant to address school physical education and activity requirements.²³² However, these legislative responses are far from uniform. Although an examination of each of these bills is outside the scope of this paper, it is worth noting that despite this recent activity, nearly fifty percent of states have not touched their P.E. requirements in over a decade.

2. Why Federal Reform is Imperative

While either state or federal legislation could theoretically address racial disparities in physical education effectively; in reality, federal standards are likely necessary. Because education has long been considered the province of local and state governments, P.E. requirements vary widely between states and within states. It was almost a century ago that Congress directed states to address physical education in schools. In that time, no consensus has

²²⁸ *Id.*

²²⁹ Kahn et al., *supra* note 132.

²³⁰ Lee et al., *supra* note 48, at 439.

²³¹ *Id.*

²³² AM. ACAD. OF PEDIATRICS, *supra* note 138 at 28.

prevailed. Today, seventeen states still do not require any P.E. in middle schools and only two states require the recommended 150 minutes of physical activity per week.²³³ Both the lack of uniformity between states and the inadequacy of P.E. requirements across states expose the need for federal intervention.

Federal legislation mandating a higher quality and quantity of physical education is necessary in order to address childhood obesity and overweight among African-American, Hispanic, and Native-American youth in particular. As described in greater detail in Part IV(A)(III) above, participation in physical education has dropped markedly over the last three decades, coinciding with the rise in childhood obesity.²³⁴ This decline has impacted students of minority racial backgrounds more than it has white students. Studies demonstrate that both the amount of time spent in P.E. class as well as the vigor of the physical activity engaged in during that time is lower for minority students as compared with their white counterparts.²³⁵ The racial disparities in school-sponsored physical activity do not end with the close of the school day. Rather, minority students attend schools with fewer sports teams and thus participate in school sports at lower rates.²³⁶ Because states historically have taken radically different approaches to issues of racial inequality, the Federal Government has assumed the lead in fighting racial disparities in housing, voting, employment, and education. Federal involvement in ending racial disparities both in childhood obesity generally, and in physical education and school sports more particularly, may be a necessary extension of this historical role.

Moreover, federal legislation is necessary to reverse the impact that No Child Left Behind (“NCLB”)²³⁷ has had on physical education. Part of the recent decline in minority participation in both P.E. and school sports is likely attributable to the effects of No Child Left Behind. NCLB requires all districts and schools receiving Title I funds to meet “adequate yearly progress” goals set by their states.²³⁸ Schools that fail to meet these goals two or more years in a row face increasing penalties and sanctions.²³⁹ This framework, which was intended to establish more accountability and uniformity across schools, has been the subject of fierce debate both in the educational and political realms. Putting aside the merits or flaws of NCLB as it pertains to academic achievement, anecdotal evidence suggests that it has had an obvious impact on physical education, especially as it pertains to minority students. To accommodate rigorous testing standards, many schools have reduced the amount of time students spend in P.E. or turned P.E. into additional test preparation time.²⁴⁰ This effect has likely been greater in minority-majority schools that have historically struggled with academic achievement. As NCLB is national in scope, an effective response to its impact on P.E. should also have nationwide reach, thus requiring federal legislation.

Practical obstacles to action at the state level also militate in favor of federal legislation. A study of state legislative activity in the realm of physical education noted that bills in state

²³³ Kahn et al., *supra* note 132.

²³⁴ See discussion *supra* Part III.A.III.

²³⁵ *Id.*

²³⁶ *Id.*

²³⁷ No Child Left Behind Act, Pub. L. No. 107-110, 115 Stat. 1145 (2002).

²³⁸ U.S. Department of Education, *Key Policy Letters Signed by the Education Secretary or Deputy Secretary*, July 24, 2002, <http://www2.ed.gov/policy/elsec/guid/secletter/020724.html>.

²³⁹ *Id.*

²⁴⁰ Hubbard, *supra* note 66, at 208 n.46; see also Alex Harary, *Battling the Bulge: Chapter 32 Clarifies Requirements for P.E. Exemptions*, 40 MCGEORGE L. REV. 339, 342-43 (2009).

legislatures focusing on P.E. requirements encountered substantial political resistance and passed in less than one-in-five cases.²⁴¹ While a federal bill may also be met with opposition, marshaling the resources necessary for one successful national campaign may prove easier than executing fifty successful local operations simultaneously.²⁴² Furthermore, in order to be effective, dramatic changes to physical education programs are going to require significant financial and structural support. With many state and local governments facing large fiscal deficits and cuts to their education budgets, federal financial support is vital. Given these obstacles, if any nationally uniform standards are to prevail, they will likely have to come as a result of federal mandate and not through state-level experimentation.

3. Proposals for Reform

The wide variation in state P.E. standards has not gone unnoticed; “[i]n response to the apparent inability of states to reach a consensus on the issue of physical education, an amendment to the No Child Left Behind Act (“NCLB”) was recently proposed at the federal level.”²⁴³ The amendment, known as the Fitness Integrated with Teaching Kids Act, H.R. 1585, or “FIT” Kids Act, seeks to use the already existing NCLB framework to increase both the quantity and quality of physical education students receive.²⁴⁴ The Act seeks to accomplish these objectives through three main mechanisms: it provides for the collection and dissemination of information pertaining to the quantity and quality of physical education in schools, at the local and state levels; it mandates more research into physical education and childhood obesity; and it instructs the Secretary of Education to develop and promulgate best practices.²⁴⁵ The FIT Kids Act was passed by the U.S. House of Representatives and referred to the U.S. Senate on April 21, 2010.²⁴⁶ The following day the Bill was received by the Senate and referred to the Committee on Health, Education, Labor and Pensions, where it remains at the time of this writing.²⁴⁷

First, the Act mandates that local educational agencies in states receiving federal funds under Title I of the Elementary and Secondary Education Act of 1965 compile and provide to the public a variety of information pertaining to healthy eating, physical education, and physical activity.²⁴⁸ Specifically, these agencies must post on their website, or otherwise make available, the CDC guidelines²⁴⁹ that recommend that children engage in sixty minutes or more of moderate-intensity aerobic physical activity each day.²⁵⁰ The agencies must also specify how much time children in their districts are required to spend in physical education and take the extra step of

²⁴¹ Karen E. Peterson & Mary Kay Fox, *Addressing the Epidemic of Childhood Obesity Through School-Based Interventions: What Has Been Done and Where Do We Go From Here?*, 35 J.L. MED. & ETHICS 113, 117 (2007).

²⁴² The fact that a bill has already passed the House of Representatives also indicates that Federal regulation may be a politically viable option. See discussion *infra* Part IV.C.III.

²⁴³ Hubbard, *supra* note 66, at 209.

²⁴⁴ Fitness Integrated with Teaching Kids Act, H.R. 1585, 111th Cong. (2011).

²⁴⁵ *Id.*

²⁴⁶ FIT Kids Act, H.R. 1585, available at <http://www.govtrack.us/congress/bill.xpd?bill=h111-1585> (last visited Oct. 21, 2010).

²⁴⁷ *Id.*

²⁴⁸ H.R. 1585.

²⁴⁹ *Physical Activity for Everyone*, CENTER FOR DISEASE CONTROL AND PREVENTION, <http://www.cdc.gov/physicalactivity/everyone/guidelines/children.html> (last visited Nov. 9, 2010).

²⁵⁰ H.R. 1585.

comparing their physical education curriculum to either CDC standards or state-adopted standards.²⁵¹ In addition to making this information publicly available, the local education agency must supply this information to the state education agency directly, and must assist each school within its territory with disseminating this information to the families enrolled in their school.²⁵² Schools must further include a description of their physical education facilities in materials distributed to parents and students.²⁵³ By promoting the dissemination of information and training to parents and the public, the FIT Kids Act seeks to engage families in the fight to reform P.E.²⁵⁴

The FIT Kids Act also mandates further research into the connection between physical education and childhood obesity. Section four of the Act directs the Secretary of Education to enter into a contract with the National Research Council of the National Academy of Sciences to study and make recommendations regarding:

- (A) various means that may be employed to incorporate physical activity into elementary school and secondary school settings, and before- and after-school programs; (B) innovative and effective ways to increase physical activity for all students in kindergarten through grade 12; and (C) efforts to encourage the participation of students with disabilities in physical education programs and the types of accommodations used to increase the participation of such students; (2) study the impact of health, level of physical activity, and amount of physical education on students' ability to learn and maximize performance in school.²⁵⁵

The Secretary of Education is also directed to conduct a study of the types, frequency and duration of student participation in physical education and intramural sports in public schools across the U.S.²⁵⁶

Finally, the Act seeks to meet its goal of increasing the quantity and quality of physical education in public schools by providing for the dissemination of best practices. The Secretary of Education must supply state and local educational agencies with best practices for physical education and activity.²⁵⁷ Under the Act this information must not only include suggestions for meeting the CDC guidelines, but must also identify and address common challenges to implementing these best practices.²⁵⁸ Finally, the best practices are to be updated after the results of the studies performed under Section Four have been concluded.²⁵⁹

4. The Limitations of the FIT Kids Act and its Potential for Success

Effective amendments to physical education requirements have the potential to greatly

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ American Heart Association, *Bill Description: S.364/H.R. 1585*, <http://www.americanheart.org/downloadable/heart/1239304733077FITKidsBillDescription.pdf> (last visited May 4, 2010).

²⁵⁵ H.R. 1585.

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ *Id.*

²⁵⁹ *Id.*

impact childhood obesity universally. Available research indicates that increasing physical education and school-sponsored sports participation would both increase physical fitness and decrease adiposity among children and adolescents. After reviewing fourteen different studies, the CDC concluded that,

school-based PE was effective in increasing levels of physical activity and improving physical fitness. The review included studies of interventions that increased the amount of time spent in PE classes, the amount of time students are active during PE classes, or the amount of moderate or vigorous physical activity (MVPA) students engage in during PE classes. Most studies that correlated school-based PE classes and the physical activity and fitness of students focused on the quality and duration of PE classes (e.g., the amount of physical activity during class, the amount of MVPA) rather than simply whether PE was required. However, requiring that PE classes be taught in schools is a necessary minimum condition for measuring the effectiveness of efforts to improve school-based PE class curricula.²⁶⁰

Furthermore, the studies revealed that modifications to physical education curricula increased physical activity among children regardless of race, ethnicity, gender, socioeconomic status, or geographic location.²⁶¹ Research has also shown that participation in after-school activities, such as sports, can decrease body fat and increase cardiovascular health among children and adolescents.²⁶² These findings were strong enough to lead both the American Diabetes Association and the CDC to recommend changes to school physical activity environments.²⁶³ Federal standards addressing the quality and quantity of physical education can help reduce rates of overweight and obesity among Native-American, Hispanic, and African-American youth by tackling one of the school-based causes of adiposity in these children.

The FIT Kids Act, as written, fails to capitalize fully on the potential of physical education reform; with some alterations, the Act could have a far greater impact than it currently promises. To begin, section four of the bill, which mandates two separate studies on this topic, should include a directive that both the Secretary of Education and the National Research Counsel document and study racial disparities in access to and quality of physical education and intramural sports. Specifically, these studies should be directed to examine and give recommendations regarding the frequency, duration and intensity of physical education classes and school sport participation. Particular emphasis should be placed on identifying causes of racial disparities in this realm, such as insufficient funding, teacher shortages, inadequate teacher training, a dearth of facilities or equipment, and the corrosive influence of NCLB testing standards, etc. In order to truly appreciate the link between physical education and rising levels of childhood obesity, the studies must seek to understand the origins of racial disparities in this realm. Further, under section five, the Secretary of Education is responsible for adjusting best practices in accordance with the findings of this research. Only if researchers are directed to focus on racial disparities can we determine whether best practices vary according to school environment or population.

The FIT Kids Act currently does little to actually reform existing physical education

²⁶⁰ Kahn et al., *supra* note 132, at 21.

²⁶¹ *Id.* at 21-22.

²⁶² *Id.* at 23.

²⁶³ Peterson & Fox, *supra* note 241.

requirements. Section three, which provides for the collection and dissemination of information pertaining to physical education and activity at the school, district, and state level, does not go far enough. It may be that some states or districts will amend their P.E. requirements as a consequence of this section, but that is nothing more than a “maybe.” In order to realize the potential impact of physical education reform on the reduction of childhood adiposity, section three should also establish the CDC recommendations as a national goal, thus preempting state requirements. To ensure that this goal is more than a mere aspiration, the FIT Kids Act should give states the option to either forgo Title I funds or to incorporate physical education and intramural sports into their existing NCLB standards-based framework. The receipt of these funds should be conditioned on states establishing yearly proficiency goals for the quantity and quality of P.E. children receive, which should build annually toward the national target of 60 minutes of moderate-intense aerobic physical activity each day. Under this framework, states would retain the responsibility for creating and implementing assessments to track school performance as they track academic achievement under NCLB. Further, this approach should share NCLB’s emphasis on tracking and improving performance among minority students in particular. Finally, the FIT Kids Act should support state efforts to reach this national goal by providing additional funding for teacher training, equipment, structural expansion, and insurance.

These suggested modifications to section three of the FIT Kids Act strike an appropriate balance between federal and state involvement, while capitalizing on the potential of P.E. reform. As the CDC noted, requiring that physical education be taught is a “necessary minimum condition” for realizing the positive effects of P.E. on levels of physical activity and obesity among youth.²⁶⁴ Under the structure suggested in this article, the FIT Kids Act would in fact meet this prerequisite, although it fails to do so in its current form. Congress must take the lead in establishing uniform vigorous standards because the states have historically failed to do so. Additionally, federal financial resources are necessary where that state and schools district funds are finite. Because states are more familiar with the structural, personnel, and fiscal limitations of their schools, they are in a better position to craft yearly incremental goals that advance towards the CDC recommendations; states are similarly well-situated to develop and implement assessments that measure their progress. Thus physical education reform will be most effective in fighting the racial gap in childhood obesity if it involves a partnership between state and federal governments like the modified FIT Kids Act proposed here does.

V. CONCLUSION

Childhood obesity is a complex and costly problem. The prevalence of overweight and obesity among American children is not merely a matter of caloric imbalance. Rather, environmental, social, and behavioral factors all play a role in contributing to this burgeoning epidemic. The costs and consequences of childhood obesity are nearly as diffuse and numerous as its causes. Adiposity in youth can have serious effects on a child’s physical health, his or her psychological and social well-being, and on the likelihood that he or she remains overweight and obese into adulthood. Accordingly, childhood obesity has garnered incredible attention from the public at large, as well as from legislators and policymakers.

Despite popular and political awareness of the obesity epidemic, little attention has been paid to racial disparities in childhood obesity. This article attempts to rectify that glaring omission by seeking to understand the contributors to the racial gap and to identify the legislative

²⁶⁴ Kahn et al., *supra* note 132, at 21.

proposals most likely to address those particular causes. Research demonstrates that school-based, neighborhood-based, and family-based causes all contribute to higher rates of overweight and obesity among children of color. While no single legislative response will be the panacea for all of these factors, federal, state and local governments can work together to reduce overweight and obesity among African-American, Hispanic, and Native-American youth. A federal ban on television marketing of food to children, local land-use planning to address food access and built environment concerns, and national physical education requirements directly address the causes of childhood obesity that disproportionately impact communities of color. If legislators are to be successful in reducing rates of childhood overweight and obesity across the board, they must not overlook racial disparities. Finding and implementing effective solutions for African-American, Hispanic, and Native-American children is essential to attaining universal results in the fight against obesity.