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Transforming Food Deserts to Reverse Childhood Obesity Among the Latino Population

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Abstract

The prevalence and magnitude of childhood obesity in the U.S. is rising and far-reaching. Childhood obesity creates a plethora of serious health complications including an increase in morbidity and premature mortality. In addition to the wide range of health problems, the nation will soon become overwhelmed with the health care costs associated with obesity (*The future costs*, 2009). Although many factors contribute to the childhood obesity epidemic, food deserts have the potential of making a large impact on the disparate obesity rates (PolicyLink, 2010). Food deserts are areas where healthy, affordable food is difficult to obtain and are prevalent in low-socioeconomic, minority communities (Ver Ploeg et al., 2009). Latinos are affected by some of the highest rates of overweight and obesity as compared to all other racial and ethnic groups (National Council of La Raza, 2006). Given our nation's current economic environment and proposed budget cuts, it is important to support federal policies that bolster research in the area, facilitate strategic public-private partnerships, and build on community assets to reduce the number of food deserts and improve the availability of healthy foods. Communities that introduce or expand access to healthy food markets can help to drive down obesity rates while boosting the local economy.

Introduction

In the near future, the negative effects of obesity have the potential to ripple throughout the nation, precipitating a tsunami of health care costs (*The future costs*, 2009) and contributing to stunted economic growth and national progress (Salud America, 2010). Leading public health experts agree that increasing access to healthy food in underserved areas is a critical component of any comprehensive effort to improve public health and reverse the obesity epidemic (PolicyLink, 2010).

The prevalence of obesity among Latino children and youth cannot be ignored, as Latinos are the fastest growing and most populous ethnic minority group in the U.S. (US Census, 2010). Over the past 40 years, obesity rates for children ages 6 to 11 have nearly tripled, from 5 percent to 14 percent, and more than tripled for adolescents ages 12 to 19, from 5 percent to 17 percent (Childhood Overweight, 2010). There are approximately 13 million obese children and adolescents in the U.S., all of which have an 80 percent chance of becoming obese adults (Childhood Overweight, 2010). Obesity disproportionately affects Latinos compared to whites (NCLR, 2006).

Although many factors contribute to the childhood obesity epidemic, addressing food deserts could have a positive impact on the disparate obesity rates. Food deserts are areas where healthy, affordable food is difficult to obtain. Access to healthy food is a major problem for mil-

lions of Americans (Ver Ploeg et al., 2009). Area-based measures show that 23.5 million people nationwide, or 8.4 percent of the population, live in low-income communities* that do not have a supermarket or large grocery store within one mile of their home (Ver Ploeg et al., 2009). Food deserts present a significant challenge to accessing healthy foods for many Americans, particularly those in low-income urban communities, rural areas, and communities of color (PolicyLink, 2010).

Given our nation's current economic environment, proposed budget cuts, and increase in health care costs associated with obesity-related diseases, it is more important than ever to leverage current resources and preserve the current funding allocated for sustainable community-based prevention efforts. Reversing childhood obesity rates among Latinos will require an effective, comprehensive, and coordinated prevention strategy, which includes supporting policies that encourage targeted research, facilitate strategic private-public partnerships, and build on community assets to reduce food deserts. This paper examines the current food desert landscape and obesity epidemic, the impact of current federal legislation, and proposed federal policy recommendations to stem the epidemic.

*Areas where more than 40 percent of the population have income at or below 200 percent of the Federal poverty threshold (Ver Ploeg et al., 2009).

The 2010 White House Task Force on Childhood Obesity found that limited access to healthy food options can lead to poor diets and higher levels of obesity and other diet-related diseases, including diabetes and heart disease (USDA, 2010).

Background

Food Deserts

Food deserts are defined by the United States Department of Agriculture (USDA) Economic Research Service (ERS) report as an area in the United States with “low-access” to affordable and nutritious food, particularly such an area composed of predominantly lower-income neighborhoods and communities (Ver Ploeg et al., 2009). A “low-access” area is a community of which at least 33 percent of the population resides more than one mile from a supermarket or large grocery store, or more than 10 miles for a rural community (Ver Ploeg et al., 2009).

Urban communities and rural communities both experience food deserts, but in different ways. Residents of urban, low-income communities, which are often over-represented by minorities (Turner & Fortuny, 2009), are saturated with fast food and convenience stores that sell an abundance of high-fat, high-sugar processed foods, while residents of rural communities are faced with a lack of any nearby food options (PolicyLink, 2010). Both of these communities must travel long distances to access the fresh foods necessary for a healthy diet (PolicyLink, 2010).

The 2010 White House Task Force on Childhood Obesity found that limited access to healthy food options can lead to poor diets and higher levels of obesity and other diet-related diseases, including diabetes and heart disease (USDA, 2010). Studies examining the effect of small corner or convenience stores in underserved areas offering healthier food options and fewer less healthy options showed that stocking and promoting healthier food items led to an increase in the sale of those items (Ver Ploeg et al., 2009). In general, research indicates that better access to a supermarket is linked to

a reduced risk of obesity, whereas better access to convenience stores is linked to an increased risk of obesity (Ver Ploeg et al., 2009).

It may seem counterintuitive that a lack of access to food is linked to obesity—a condition related to the overconsumption of calories. However, it is hypothesized in a USDA ERS report that there is a causal pathway between a dearth of healthy options and bodyweight, given that many communities in food deserts are forced to rely on energy-dense options, which can lead to weight gain (Ver Ploeg et al., 2009). If healthier options are available at equivalent prices to energy-dense foods, then consumers may substitute the energy-dense foods for healthier foods, in turn reducing the risk of obesity. However, many low-income communities that lack access to supermarkets are also replete with fast-food restaurants and convenience stores, which often offer unhealthy foods at a cheaper price than healthy foods on a per calorie basis (Drewnowski & Specter, 2004), facilitating unhealthy purchasing behavior (Babey et al., 2008). Additionally, more Latino children are living in poverty compared to children of any other racial or ethnic group (The Pew Charitable Trusts, 2011). It may be this combination of easy access to and affordability of unhealthy food options, especially for youth from families of low socioeconomic status (Powell, 2009), with the lack of access to nutritious foods that better explains the increase in obesity rates than simply “food deserts” (Ver Ploeg et al., 2009).

Obesity is a complex issue with multiple causes and therefore cannot be solved in an isolated manner. The 2009 USDA ERS report determined that relatively easy access to all other foods may be more important than the lack of access to specific nutritious foods with regards to obesity. Although many studies, including those identified in the 2009 USDA ERS report,

have hypothesized and found a strong correlation between food accessibility and obesity, the causal pathway is not fully understood. Therefore, more research is needed to determine whether or not a more robust intervention is necessary beyond simply providing healthy options. Although gaps in research remain, it is not too soon to begin protecting our children and the future of the nation’s health using the best evidence available now to guide strategic policy changes.

Defining Obesity and Related Health Problems

For the first time, we are facing a generation of children that may live sicker and shorter lives than their parents due to the consequences of obesity (Olshansky et al., 2005). Obesity is a label for the range of weight that is more than what is considered healthy for a given height, and identifies ranges of weight that increase the likelihood of developing given diseases and other health problems (Centers for Disease Control and Prevention, 2011). Obesity is a serious problem and major public health challenge, as it poses both immediate and long-term damaging health effects.

The increasing prevalence of obesity has disproportionately affected Latinos and their children (NCLR, 2006). Latino children and youth are at greater risk of becoming obese than their white or African-American peers (Overweight, 2010). More Latino children ages 2 to 11 are obese than their peers, with 14 percent of Latino children ages 2 to 11 are obese compared to 9 percent of white children of the same age (Overweight, 2010). Among Latinos, 25 percent of children ages 6 to 11 are obese, compared to 19 percent of white children in the same age group (Overweight, 2010). A complex interaction of environmental, socioeconomic, and cultural factors contribute to this dispar-

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ity, including the overrepresentation of Latinos in low-income communities and the food environment, which is often inundated with unhealthy foods and deplete of healthy foods (Salud America, 2011).

Obesity is laden with a variety of health-related consequences, including physical and psychosocial risks. These health consequences may present as an imminent threat, as well as placing the individual at risk for health-related problems later in adulthood (CDC, 2011). Physical risks related to obesity include certain cancers (Department of Health and Human Services, 2009), cardiovascular disease, type 2 diabetes, asthma (CDC, 2011), sleep apnea, orthopedic problems, high levels of cholesterol and blood pressure, and other debilitating diseases (Institute of Medicine, 2004). The increased risk for obesity in the Latino population generates overwhelming disparities in obesity-related co-morbidities. The lifetime risk of developing type 2 diabetes for Latinos or African-Americans is nearly 50 percent, which is twice that of white newborns (Urrutia-Rojas & Menchaca, 2006). For those children who are obese before the age of eight and develop into obese adults, there is a greater likelihood for more severe health risks associated with adulthood obesity (Freedman, Khan, Dietz, Srinivasan, & Berenson, 2001). Psychosocial risks related to obesity include being the target of early and systematic social discrimination (Dietz, 1998). The psychological stress induced by the social stigmatization may cause low self-esteem (Swartz & Puhl, 2003) and depression (IOM, 2004), leading to a deterioration of academic performance and social functioning, continuing into adulthood, which represents the second major source of adult morbidity related to childhood obesity (Swartz & Puhl, 2003).

Costs of Obesity

In addition to individual health problems, obesity also generates economic consequences, which have a significant impact on the U.S. health care system. Direct health care costs associated with adult obesity have risen to \$147 billion annually (Finkelstein et al., 2009), and an additional \$14 billion for childhood obesity (Marden & Chang, 2005). Children treated for obesity-related health problems cost the health care system approximately three times more than an average child (Marden & Chang, 2005). If trends remain unchanged, experts estimate that obesity-related costs could skyrocket to \$344 billion annually by 2018 (The future costs, 2009). Additionally, obesity has a significant impact on the labor market and workforce. Currently, obesity-related job absenteeism totals \$4.3 billion annually (Cawley, Rizzo, & Haas, 2007) and presenteeism associated with obesity totals \$506 per employee (Gates et al., 2008). As our current generation of children grow and enter the workforce, these costs could reach unsustainable levels (Barkin et al., 2010).

The disparate rates of childhood obesity that effect the Latino population must be addressed immediately, as Latinos are the largest ethnic minority group in the U.S. (US Census, 2010). The Latino population grew by 43 percent between 2000 and 2010, and now comprises 16 percent of the total population (US Census, 2010). The negative effects of obesity in this growing population have the potential to make a substantial contribution to the unsustainable health care costs, higher disability rates, lost productivity, stunted economic growth, and ability to compete in the global market (Salud America, 2011). Leading public health agencies and organizations, including Institute of Medicine (IOM), American Heart Association (AHA), Centers for Disease Control and Prevention (CDC), and the American

Public Health Association (APHA), all agree that increasing access to healthy food in underserved areas is a critical component of any comprehensive effort to improve public health and reverse the obesity epidemic (PolicyLink, 2010).

Current Legislation

Multiple programs and policies have been introduced and implemented with the goal of improving access to affordable and nutritious foods. The majority of programs and policies have been initiated at the community, local, or state level. More recently, between 2010 and 2011, federal policies, including Community Transformation Grants (CTGs) and the Healthy Food Financing Initiative (HFFI), were introduced in Congress with the potential to have a substantial impact on food accessibility for communities across the nation.

The funding authorized in the Prevention and Public Health Fund for CTGs and bicameral congressional support for the Healthy Food Financing Initiative demonstrates our nations' commitment to investing in the prevention of disease, which is in line with evidence from a variety of studies indicating that targeted, strategic investments in community-based prevention programs can result in significant improvements to the health of Americans, U.S. health care cost savings, and overall economic cost savings (Trust for America's Health, 2009). Additionally, and of utmost importance, both policies allow for and facilitate community-based solutions building off of community assets to transform the places where residents live, work, play, and learn so that they can live healthier and more productive lives. The grants and loans have the potential to empower local communities with the critical resources, information, and flexibility to improve the health of the residents in underserved communities.

In addition to improving the quality of life for many Americans, the astronomical costs associated with obesity should drive policy makers to develop policy and establish how to best allocate resources to reverse the trends of obesity.

Community Transformation Grants (CDC, 2012)

The Prevention and Public Health Fund (Fund) was created as part of the Patient Protection and Affordable Care Act (ACA) to invest in cross-cutting, innovative prevention programs with the aim of transforming the U.S. public health system and supporting Americans in leading longer and healthier lives. The Fund is the first stable federal funding source committed to public health and prevention.

Community Transformation Grants were announced in May 2011 by the Department of Health and Human Services (HHS) as a component of the Fund. HHS has since awarded \$103 million to 61 states and communities, which will serve about 120 million Americans. The grant programs will be funded every year for the next four years. CTGs are intended to support community-driven strategies to reduce the leading causes of chronic disease, including obesity and poor nutrition. The grants allow for communities to lay a foundation for sustainable prevention efforts that are tailored to their specific needs. Consistent with the law, CTGs will focus on five priority areas, including healthy eating and healthy environments.

Community Transformation Grants will allow the government to make targeted, high priority investments across a spectrum of prevention and public health initiatives while blending the expertise, technical assistance, and data with state and local, on-the-ground experts who best understand the needs of their community. For example, through this funding, the North Carolina Division of Public Health is committed to increasing the number of convenience stores that offer fresh produce, and increase the number of communities that support farmers' markets, mobile markets, and farm stands (Koh, 2011).

Healthy Food Financing Initiative

The Healthy Food Financing Initiative was introduced in both the U.S. House of Representatives and U.S. Senate to invest \$125 million to reduce the number of food deserts as one aspect of combating the national childhood obesity epidemic, while potentially creating or preserving thousands of jobs. The initiative would charge the USDA with designating a Community Development Financing Institution (CDFI) as a National Fund Manager, to administer one-time loans and grants through a competitive process. Additionally, the National Fund Manager would be responsible for leveraging additional private dollars to create the Healthy Food Financing Fund. As directed by the bill, the National Fund Manager would have to partner with local groups, state, and municipal governments to administer the funds and provide the critical flexibility to respond to the unique needs of each community. HFFI would offer affordable financing and technical assistance to expand the availability of healthy food options in distressed communities.

The proposed HFFI legislation is modeled after the highly successful Pennsylvania Fresh Food Financing Initiative, a public-private partnership created in 2004. In five years, the initiative turned \$30 million of state seed money into \$190 million of additional investments and opened 83 new or improved fresh food stores in underserved rural and urban communities throughout the state, while creating or retaining 5,000 jobs (PolicyLink, 2010). The initiative continues to significantly improve access to healthy food statewide and drive long-term economic development (PolicyLink, 2010).

Given the country's current obesity crisis and economic downturn, HFFI has the potential to address the national problem in a deeper and more focused way. Many grocery store operators in underserved

communities face greater obstacles when establishing new or expanding existing healthy food financing partnerships. Barriers include high start-up costs, limited access to credit, and expensive workforce development needs. The lack of grocery stores in many low-income communities represents a market failure that can be solved through a one-time grant or loan funding program. Independent grocers are in a unique position to help address food deserts, due to their flexibility and commitment to the communities they serve, which can be leveraged through strategic private-public partnerships.

The Pennsylvania Fresh Food Financing Initiative model has shown that when retailers have assistance with the initial start-up costs, they will locate in underserved communities or expand their store to provide healthier options, and are successful in running their business (PolicyLink, 2010). The proposed HFFI builds on the Pennsylvania Fresh Food Financing Initiative model by providing the critical seed money to lessen the obstacles for grocery store operators nationwide. This legislation would marry the two basic needs of our country's most vulnerable populations—secure jobs and healthy food to help curb the obesity epidemic and improve the quality of life.

Policy Recommendations

In addition to improving the quality of life for many Americans, the astronomical costs associated with obesity should drive policy makers to develop policy and establish how to best allocate resources to reverse the trends of obesity. The following recommendations provide a broad framework to guide federal policy makers in efforts to support and serve Latino and other low-income communities that lack access to nutritious foods.

By dedicating federal resources, developing and bolstering private-public partnerships, leveraging community assets, and strengthening research in targeted areas, there is strong potential to improve the food landscape and consequently reduce the rising morbidity and mortality rates that are associated with obesity.

■ **Preserve and strengthen prevention and financing initiatives with strong potential to improve the health of Americans.**

Although investments in initiatives such as CTGs and HFFI have the potential to act as catalysts in stemming the obesity epidemic, these investments are only small down payments relative to the overall value of prevention and size of the problem. It is crucial to, at minimum, sustain these public health investments to improve community health outcomes and reduce both direct and indirect costs in the long-term and must be used to supplement, not supplant other current public health investments. Additional investments in community-driven food initiatives have the potential to generate even greater health improvements and cost savings over time.

■ **Continue fostering private-public partnerships.** Incorporate language in federal legislation, just as HFFI proposes, that facilitates the development of strategic private-public partnerships to leverage existing resources and community assets to invest in healthy food retail.

■ **Support additional research** to better understand the link between food deserts and obesity among Latino children and youth. Continued research is necessary to address issues concerning:

- The challenges that limit local and State government in addressing food deserts, such as preemptive laws, and the role of federal legislation.
- The quantity and density of unhealthy food options specifically within Latino communities given the overrepresentation of Latinos in urban, low-income communities,

which are often saturated with unhealthy foods.

- The effectiveness of federal policies on improving food environments by improving the availability and accessibility of healthy foods.
- The interaction between behavior, environment, and federal policy—and their combined impact on Latino youth’s dietary and obesity patterns.

Summary

By dedicating federal resources, developing and bolstering private-public partnerships, leveraging community assets, and strengthening research in targeted areas, there is strong potential to improve the food landscape and consequently reduce the rising morbidity and mortality rates that are associated with obesity. It is important to note that although the recommended strategies that address food deserts have the potential to make a large impact, they must also be coupled with other strategies in order to further address other major factors contributing to the disparity and epidemic. It is unlikely that major reductions in obesity rates and disparities will be accomplished within a short-term period due to the complexity and pervasiveness of the problem. It has taken many years to become an obese nation and will take many more to reverse the trend. Therefore, it is important for the policies and programs to be implemented well and sustained throughout an extended period of time, including ensuring the preservation and growth of funding. Interim evaluation strategies will be important to measure the progress that policy changes have on the behaviors that support the prevention of obesity in the Latino population. We must work together to make the healthy choice the easy choice for Latino children and youth in all environments.

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