

Recommendations for Policy Improvements and Environmental Changes to Address Obesity

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INTRODUCTION

Communities along the United States/Mexico Border lead their respective countries in rates of what has proven to be the most complex public health problem ever faced: obesity. Among adults, co-morbidities associated with obesity include hypertension, dyslipidemia, chronic inflammation, and hyperinsulinemia,¹ type 2 diabetes, certain cancers, non-alcoholic fatty liver disease, gallbladder disease, sleep apnea, low pain tolerance, and osteoarthritis.² Children and adolescents are also negatively impacted by high rates of obesity and overweight with complications including cardiovascular and metabolic disease, diabetes, sleep apnea, early pu-

berty, bone problems,³ poor psychological health,⁴ including low academic performance,⁵ negative self-image, depression, and rejection by peers.⁶

Medical and productivity costs related to obesity are rapidly rising generally, including in this region. In the United States alone, costs associated with obesity had risen to an estimated US\$190 billion annually by 2011.⁷ Reductions in body weight of 5 percent to 10 percent can produce clinically significant improvements in health and could result in billions of dollars in health care savings.⁸

Opportunities for economic vibrancy along the border are relatively untapped⁹ and desperately needed to combat chronic, above-average unemployment rates.¹⁰ Today more than ever, neither country can afford to ignore the region's obesity issue and should jointly examine comprehensive

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and synergistic policy solutions, programs, and environmental change strategies to curtail it. These solutions must address the youth and adult obesity that are driving health care costs and suppressing the healthy future of this otherwise growing and vibrant region.

YOUTH OBESITY AND OVERWEIGHT IS PREVALENT ON THE BORDER

Children living in Mexico and the United States are among the heaviest in the world, but the rapid increase in obesity seen from 1980 to 1990 appears to have slowed.¹¹ However, along the border there is sufficient evidence to suggest children in this region are at least as, if not more, obese and overweight than their national counterparts and less physically fit.¹²

ADULT OBESITY AND OVERWEIGHT IS PREVALENT ON THE BORDER

Obesity among adults in Mexico and the United States is higher than in any other populous countries in the world, with Mexico ranked first with 32.8 percent of adults classified as obese, and the United States coming in second, with 31.8 percent.¹³ Within these two largely obese countries, some sections of the United States-Mexico border host their respective country's highest obesity rates.

There is an epidemiological transition in Mexico that is more notable in the northern states with rising obesity and chronic disease rates. Two states along the border, Baja California and Tamaulipas, had some of the highest obesity rates in the country in 2006.¹⁴ Along the U.S.-Mexico border, in certain sections the rate of change in obesity from 2001 to 2011 matched that of the rest of the respective country, but in other sections, including the Texas-Mexico border area, the rates far outpaced the respective country.¹⁵



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FOOD INSECURITY AND OBESITY

Research shows a significant association between food insecurity and obesity¹⁶ in both U.S. and Mexican samples.¹⁷ According to the U.S. Department of Agriculture, household food insecurity is defined as “limited or uncertain availability or access to acquire nutritionally adequate and safe food,” and it increased from 11.9 percent in 1995 to 14.6 percent in 2008 in the United States.¹⁸ However along the border, rates appear higher.¹⁹ One study from the border showed that among *colonia* residents, rates of food insecurity are the highest in the United States. This study found that 78 percent of participants experienced food insecurity, which is associated with increasing household food consumption, decreasing household income, employment, and being born in Mexico.²⁰ Likewise, results from studies in Mexico have shown a relationship between food insecurity with overweight children and food consumption. Overweight schoolchildren were found to have the highest level of food insecurity compared to those with less food insecurity.²¹ Households whose members have lower education, have lower incomes, are ethnic minorities, or that are headed by females are more likely to live in food-insecure situations.²²

ENVIRONMENTAL INFLUENCES ON OBESITY

Environmental influences such as urbanization, few opportunities for physical activity, and access to unhealthy foods are risk factors for the obesity rates on the U.S.-Mexico border.²³ It is now widely acknowledged that neighborhood characteristics facilitate excessive food intake and discour-

age physical activity, influencing an individual's risk of developing obesity.²⁴ Compelling evidence exists that obesity is associated with physical activity variables such as walkability,²⁵ land use,²⁶ urban sprawl,²⁷ density of fast-food outlets,²⁸ and accessibility of exercise facilities.²⁹ Obesity is also associated with nutrition variables such as access to supermarkets³⁰ and poor dietary options (for example, fast food, lack of vegetables).³¹ It has been shown that substantial disparities in access to healthy food exist between wealthy and non-Hispanic white communities and poor minority communities.³²

POLICY RECOMMENDATIONS

The following recommendations have been called from research, best practices, and policy recommendations made globally and historically,³³ but are refined and presented as applicable to the U.S.-Mexico border specifically. These proposals address both sides of the energy balance equation, namely, energy intake (food consumption) and energy expenditure (physical activity). The recommendations provide guidance that will support youth and adults in meeting international guidelines for nutritional intake, including consuming fruit and vegetables daily and healthy portions appropriate for gender and age and for physical activity, specifically obtaining at least 150 minutes of moderate and vigorous physical activity each week for adults and 60 minutes daily of moderate and vigorous physical activity for children.

Goal 1. *Implement prevention and intervention evidence-based programs to address youth and adult obesity in communities, schools and worksites*

Government, education, and business leaders should ensure that the monetary and personnel resources for health are directed to programs with strong scientific evidence of producing improvements in obesity and behaviors associated with obesity. Today along the border, community-based, school-based, and worksite health promotion programs are becoming more commonplace, yet often lack evidence for their ability to decrease obesity.³⁴ Also, current resource allocation patterns heavily favor treatment rather than prevention, resulting in large health care expenditures associated with the treatment and management of chronic diseases. Greater resource allocation to obesity prevention is needed to ultimately contain health care costs and create

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a healthier population.³⁵ Strategies for change should include the following and should be monitored to ensure obesity-related outcomes are achieved:

- a. All government-run or -sponsored programs addressing obesity reduction and prevention should be evidence based;
- b. Guidelines, incentives, and restrictions should be enhanced to ensure schools for children of all ages implement evidence-based obesity reduction and prevention programs; and
- c. Incentives should be given for worksites' implementing evidence-based obesity reduction and prevention programs.

Goal 2: *Implement policies and programs that increase energy expenditure for the population living along the U.S.-Mexico Border to achieve and maintain a healthy weight based on standard body mass index calculations*

Overall health and obesity improve even with small increases in physical activity. Therefore, the combination of the strategies below to enhance physical activity can add up to more people living at a healthy weight. Explicit attention should be paid to land-use patterns, transportation systems, and design of built environment to promote physical activity.³⁶ Starting the implementation of these strategies in the lowest-income or marginalized areas of a community as well as ensuring those from which the very young and the very old will benefit provides a lens for addressing health disparities. Policy and environmental change strategies to promote physical activity should include:

- a. "Complete Street" ordinances covering new and repaired roadways stipulating designated spaces for cars and bus, bicycles, and pedestrians;
- b. Connected paths, hiking and biking trails, and sidewalks to increase the likelihood of active transport for daily living routines;

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- c. Traffic-calming measures and safe routes in areas where active transport to community destinations is desired (schools, businesses, etc.);
- d. Urban and residential planning and development codes to promote walkable, bikeable communities. The codes may address permissible land use, building densities, street widths, building and street design guidelines, and parking requirements;
- e. Mandatory daily physical education for all schoolchildren, implemented in such a way that they obtain at least 20 minutes of moderate and vigorous physical activity; and
- f. Activity breaks in the classroom implemented in such a way that children get at least 10 minutes of moderate and vigorous physical activity.

Goal 3. *Implement policies and programs that foster the consumption of healthful foods and portions for the population living on the U.S.-Mexico border to achieve and maintain a healthy weight based on standard body mass index calculations*

Dietary intake must be addressed in light of food insecurity and obesity concurrently given its presence on the border. High poverty levels and unprecedented access to inexpensive high-energy-dense foods create populations who live with hunger and obesity. Today children in the U.S. consume 50 percent of their daily calories in schools; for some along the border, the only meals they consume are at schools. Therefore, the importance of foods served in school settings becomes paramount.³⁷ Policy and environmental change strategies should include:

- a. Adequate school funding for food-service programs to provide healthy, tasty food options and avoid the need to sell snacks and *a la carte* items to supplement school budgets;
- b. School cafeteria presentation of healthy foods to support its selection;
- c. Incentives for grocery stores and convenience stores to offer healthy foods, replacing unhealthy options;

- d. Incentives for restaurants to offer healthy, low calorie, and appropriately portioned foods;
- e. Increased access to locally grown produce through farmers markets, food stands, mobile markets, and community gardens. These strategies also provide increased economic benefits to the local community;
- f. Access to foods and beverages that meet strict standards for good nutrition should be allowed in all government-run or -sponsored programs, vending machines, parks and recreation programs, or worksites. Foods and beverages of minimal nutritional value (MNV) should be banned;
- g. Access to free, good-tasting water should be available in public spaces, schools, government facilities and outdoor spaces, and government-sponsored programs;
- h. Increased enrollment in government-sponsored nutritional assistance programs whose standards are aligned with good nutrition;
- i. Disincentives for the consumption of foods and beverages of MNV such as sugar-sweetened beverages. This could be done by taxing MNV items, or land-use policies to zone vendors who sell MNV items away from schools or low-income neighborhood areas; and
- j. Stronger regulations on advertising foods, including incentives for promotion of foods that meet strict standards for good nutrition, plus stronger restrictions on advertising MNV items.

CONCLUSION

Obesity is prevalent among the children, adolescents, and adults residing along the United States-Mexico border, and for the most part is higher than their national counterparts. Poverty and food insecurity are also common in this growing region. Given these complexities, the policies and environmental change strategies proposed to prevent and intervene on obesity focus on lower-cost options and strategies to modify access to food so that it is healthier, not necessarily to limit access to food. The proposed policy and environmental change strategies also build on programs and infrastructure that may already exist for low-income families such as food assistance programs and school meal/snack and physical activity practices. Numerous proposed evidence-based options for policy and environmental change strategies are available and, as feasible, should be enacted to create synergy between gov-

ernment entities, schools, and businesses so as to more fully address the situation of the majority of the population living at an unhealthy weight in the region. ■■■

NOTES

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