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Well-being y Bienestar: Innovation in School-Based Nutrition Programs in Order to Battle Latino Childhood Obesity

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Abstract

In 2010, 69 percent of all U.S. adults were either overweight or obese,[1] while more than 33 percent of all children and adolescents were classified as overweight or obese[2]. Minority groups have even worse obesity indicators: In 2008, Latino adults had an obesity rate 21 percent higher than their non-Hispanic white counterparts[3], while 39 percent of Latino children and adolescents are overweight or obese.

Federal-level nutrition policies, specifically the National School Lunch Program (NSLP), give states the resources to provide meals to needy children during the school day. Yet, despite these resources, children have a hard time eating healthy meals at school and too many children, especially Latino youth, are still overweight or obese. This brief examines one innovative program, the Bienestar Health Program, which builds on the foundation of the NSLP to decrease obesity among Latino school children. This brief also proposes that schools should go above and beyond federal nutrition standards in order to make the greatest impact against Latino childhood obesity.

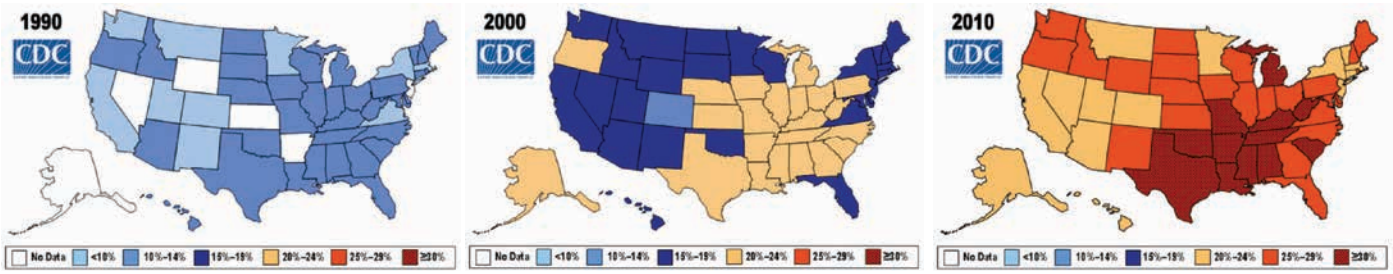
Background

In the past 25 years, there has been a dramatic increase in the number of obese adults in the United States. In 1990, most U.S. states had a population obesity rate of less than 15 percent[a]. By 2010, the majority of states (36 states) registered an obesity rate of 25 percent or higher.

Today, 69 percent of all U.S. adults are either overweight or obese. Since 2003, Non-Hispanic white adult obesity rates have stayed relatively steady, yet obesity rates continue to rise for many minority groups, including blacks and Hispanic-Americans[b].[4]

Even more troublesome than the adult obesity trend is the steady and steep rise of childhood obesity in the United States. In the past 40 years, the obesity rate among school-aged children (children who are between the ages of six and 19) has more than tripled.[5] In 2010, more than 33 percent of all U.S. children and adolescents were overweight or obese[6], with 20 percent of school-aged children being obese[7]. Overweight children have a 70 percent chance

The Fattening of America: The percentage of U.S. obese (BMI > 30) adults, from 1990 to 2010.



Obesity and obesity-related conditions are one of the biggest factors in the country's uncontrollable healthcare costs. In 2005, it was estimated that obesity and obesity-related conditions accounted for 21 percent of total medical spending in the United States — about $190 billion.

of becoming overweight or obese adults[8]. Childhood obesity increases the risk of young adults suffering from various health problems, including cardiovascular disease, Type II diabetes, high blood pressure, several types of cancer, stroke, high cholesterol, breathing problems, sleep disorders and depression[9].

Obesity is no longer just a localized health issue; the epidemic has now started to affect national and economic security. For example, 27 percent of all young adults (ages 17 to 24) are too overweight to serve in the military[10].

Obesity and obesity-related conditions are one of the biggest factors in the country's uncontrollable healthcare costs. In 2005, it was estimated that obesity and obesity-related conditions accounted for 21 percent of total medical spending in the United States — about $190 billion. About $14 billion of that was spent on childhood obesity-related medical costs.[11] Research has suggested that if the obesity trend continues, obesity-related medical costs are expected to increase between $48 billion to $66 billion per year.[12] Over a person's lifetime, the per-person medical costs for obesity are similar to those who smoke.[13]

Background: Obesity Rates Higher in Latino Community

The national obesity epidemic is particularly detrimental to the Latino community. In 2008, Latino adults had an obesity rate 21 percent higher than their non-Hispanic white counterparts.[14] Diabetes, one of the most prevalent and dangerous, obesity-related diseases is also overrepresented in the Latino community. In 2008, Hispanic adults were 1.5 times as likely to die from diabetes as non-Hispanic White adults. As of 2010, 13.2 percent of Hispanic adults, versus 7.6 percent of Non-Hispanic White adults, had diabetes.[15] Overweight and obese Latinos are more vulnerable to disease because Latinos are less likely to visit a doctor, are more likely to have cultural or linguistic barriers to appropriate care, and are nearly three times more likely than Whites to be uninsured.[16]

Similarly, Latino children are disproportionately overweight or obese: currently, about 39 percent of Latino children and adolescents are overweight or obese, compared to 32 percent of their non-Hispanic White counterparts[17]. This situation may in part be explained because Latino children have lower physical activity levels than other U.S. children[18]. Further, Mexican-American children, who represent the majority of Latino youth, eat fewer portions of fruits and vegetables than are recommended by national standards, which can indicate a less nutritious diet than recommended.[19]

The Federal Government's Role in Nutrition

Historically, public policy addressing obesity has been the purview at local and state governance levels. Yet, as obesity has become a national epidemic, federal programs have become increasingly important.

Historically, food policy in the federal government focused on food safety and processing concerns, such as creating the U.S. Department of Agriculture (USDA) Bureau of Animal Industry in 1884, and signing the Pure Food and Drug Act and Federal Meat Inspection Act into law in 1906. Later on in the 20th century, the focus of U.S. food policy shifted to nutrition-based concerns. Examples include passing the Fair Packaging and Labeling Act in 1966, issuing *Dietary Guidelines for Americans* every five years since 1980, and strengthening programs that focus on poverty, food insecurity and child nutrition.

Federal child nutrition programs include programs that support meal and milk service initiatives in schools, day care facilities and summer camps. Two of the most substantive child nutrition programs are the Supplemental Nutrition Assistance Program (SNAP), and the National School Lunch Program (NSLP).

Supplemental Nutrition Assistance Program (SNAP)

The Supplemental Nutrition Assistance Program (SNAP), originally known as the Food Stamp Program, was enacted into law in 1964[c], and appropriated $75 million to 350,000 individuals. In 2012, SNAP provided $74.6 billion in benefits to 47.7 million Americans[20]. One in three U.S. children receives SNAP benefits, making it the nation's largest child nutrition program[21]. Children receiving SNAP benefits are more likely to be food secure (defined, by the USDA, as "having enough food for an active, healthy life style") and of a healthy weight, compared to similar children not receiving SNAP benefits[22].

National School Lunch Program (NSLP)

The Richard B. Russell National School Lunch Act created the National School Lunch Program (NSLP) in 1946[d]. In 2012, the $11.6 billion program provided low-cost or free school lunch meals to 31 million children each school day[23]. Children from families with incomes between 130 percent and 185 percent of the poverty level are eligible for reduced-price lunch, while families below 130 percent the poverty line are eligible for free meals[24]. Afterschool snacks are provided at the same income basis as school lunches.[25]

The National School Lunch Program is an incredibly influential childhood nutrition program since 55.5 million children are enrolled in school and more than 35 percent of children's daily caloric intake happens during the school day.

In order for schools to qualify for the NSLP, meals must meet nutrition standards based on the latest *Dietary Guidelines for Americans* and the 2010 Healthy, Hunger-Free Kids Act (HHFKA). Currently, schools are in the midst of drastically changing their meal plans in order to follow the provisions set forth in the HHFKA. This development marks the first major change to school meals in 15 years.[26] Some of the changes schools must undertake to remain in the NSLP include, but are not limited to: meeting daily and minimum requirements for fruits and vegetables; not exceeding a weekly calorie range for all grade levels; no full-fat milk; reducing overall sodium intake by 54 percent in the next 10 years; and provide clear signage near the beginning of service lines outlining the components of each meal[27].

In order to comply with regulations, the NSLP offers a range of support to participating schools. Schools are reimbursed at a pre-specified level for each lunch and snack served (reimbursements vary according to whether the lunch sold is free, reduced or paid, varying from $2.93 reimbursement for a free lunch to $0.28 for a paid lunch). In addition to the reimbursements, schools are entitled to USDA foods, food from surplus agricultural stocks, access to USDA technical training and assistance, and student nutrition education resources.[28]

NSLP's Impact and the Need to Go Beyond It

The NSLP is an incredibly influential childhood nutrition program since more than 35 percent of children's and adolescents' daily caloric intake happens during the school day[29]. Additionally, school is a logical place to focus on childhood obesity since 55.5 million children are enrolled in school (pre-K through 12th grade)[30]. While 24 percent of students enrolled in pre-kindergarten through 12th grade are Hispanic[31], 32 percent of all children receiving reduced-price or free lunches through the NSLP are Hispanic[32]. Since Hispanic children are overrepresented in the NSLP, innovations in school-based nutrition programs can have a large impact on reducing Hispanic childhood obesity.

While the NSLP provides resources for schools to ensure that students receive meals during the school day, the NSLP does not ensure that students receive proper education or support about healthy life choices. Innovative programs have started to build on the efforts of the NSLP to encourage children in making healthy decisions. Below, we look at one of those innovative programs making progress in the fight against Latino childhood obesity: the Bienestar Health Program.

Bienestar: A Coordinated School Health Program[e]

The Bienestar Health Program ("well-being" in Spanish) is a K – 8th grade coordinated school health program approved by the Texas Education Agency[33]. Bienestar is a bilingual and culturally-tailored diabetes prevention program. The pilot program took place during the 2001-2002 school year in San Antonio, Texas, and included 1,419 fourth-grade students. Since Bienestar's inception, the program has spread to The Bronx, New York; Lawrence, Massachusetts; and other parts of Texas. Bienestar provides children with 50 health programming sessions over a seven-month period. The health sessions focus on decreasing dietary saturated fat intake, increased fiber consumption and increased physical activity.

The program was created in order to impact the personal factors (health knowledge and beliefs), social systems (family, peers, and teachers), physical environment (classroom, playground, cafeteria, and home) and behaviors (saturated fat intake, fiber intake, and physical activity) that have been shown to affect health outcomes. Most importantly, the program was created with a specific Latino audience in mind: all program materials were created to be bilingual, and to include culturally and contextually relevant themes.

The Bienestar program consists of four distinct components: 1. Health and physical education class, 2. Health club participation, 3. "Family fun fiesta" (a health fair where both parents and students are encouraged to attend), and 4. School food service education. Participating students are encouraged to set goals and keep records of their accomplishments. At the end of the semester, participating parents and students are rewarded with "Bienestar coupons" that they can redeem for merchandise (such as donated clothes, household appliance, school supplies, toys, and gift certificates) at a "tiendita" (little store).

The health and physical education class is held five days a week with one day focusing on health education and the other four days focusing on physical activities. Lessons focus on nutrition, self-esteem and self-control, diabetes, and physical activity.

The health club is a weekly afterschool club that reinforces the health and education class learning and promotes physical activity. Students and parents are encouraged to attend and club activities include: cooking classes, aerobics, games, dancing, and arts and crafts.

About 35 percent of all eligible Hispanic students are not enrolled in the National School Lunch Program.[38] Barriers to NSLP and other school-based nutrition program enrollment can include lack of language access, transportation, application requirements confusion or apprehension[39].

Family fun fiestas are held every other month and include cooking demonstrations, salsa dancing, a nutrition "loteria" (bingo) game and a wheel of health game. These fiestas promote nutrition education and physical activity.

Lastly, the school food service component is designed to improve nutrition knowledge of the food service staff and to persuade students during the lunch period to choose and eat more fruit and vegetables and less fatty foods.

The current iteration of Bienestar, called NEEMA ("wellness" in Swahili), is adapted to suit African-American children. NEEMA is still in its pilot-testing stages. This iteration of the program is particularly exciting news as 25.7 percent of African-American children, ages six to 17, are obese compared to 14.6 percent of their non-Hispanic White counterparts.[34]

Bienestar Health Program Results and Impact

The Bienestar program's ultimate goals are to ensure that school-aged children develop a positive belief related to healthy food choices and physical activity while also increasing social support for both. Over the seven-month period when data were collected, Bienestar students showed favorable changes in dietary fiber intake, fitness levels, and fasting capillary glucose (FCG) levels. A patient's FCG level is determined by a blood test and is a key measurement in screening for diabetes and pre-diabetes.

However, body fat and dietary fat intake did not decrease significantly. While these measurements did not show large decreases, the program's overall effectiveness should not be underestimated. Weight loss in prepubescent children is much more difficult because children go through yearly increases in body weight and body fat as part of their normal growth and development[35]. Secondly, research shows that FCG levels are a more accurate predictor of diabetes and other overweight/obesity-related health problems. Lastly, this program's components incorporated social support and peer pressure, two components that have been shown to improve long-term program compliance and better health outcomes[36]. The long-term success of the program will be dependent on and credited to the coordinated approach and collaboration among students, parents, teachers, coaches, administrators, school nurses, and cafeteria staff.

Ensuring Success & Inspiring Innovation: Recommendations for Healthier Schools

The success of Bienestar is based not only on cooperation among multiple stakeholders but also that it works within already existing resources. Bienestar does not change the NSLP; instead it is a supplemental program that ensures that students have accurate, and culturally tailored, nutritional knowledge and the right support to make healthy life decisions.

In order to substantively impact Latino childhood obesity, communities and school districts must allow school nutrition programs to be widely available, culturally-appropriate and innovative. Below are recommendations that many schools can easily incorporate into their current nutrition programs:

Widely Available Nutrition Program Participation

- New evidence shows that obesity is established early in childhood[37] — that is, if a kindergartener is overweight, he/she is likely to be obese by eighth grade and stay that way into adulthood. It is critical that obesity be prevented at the earliest possible age. Local school nutrition programs must ensure that all qualified children are enrolled in nutritious reduced and free-lunch programs, including those in day care and pre-Kindergarten programs.
- About 35 percent of all eligible Hispanic students are not enrolled in the National School Lunch Program.[38] Barriers to NSLP and other school-based nutrition program enrollment can include lack of language access, transportation, application requirements confusion or apprehension[39]. School districts with high Latino student enrollment must make concerted NSLP registration efforts. Coordinated enrollment drives should be held throughout the year while bilingual educational materials about program eligibility and requirements should be readily available, easy-to-read, easy-to-understand, and sent to student homes. Schools should make a concerted effort to follow up with parents who have not enrolled their eligible children.

Culturally Appropriate Food Options

- Some of the new standards mandated by the passage of the HHFKA have been criticized as being too rigid. Some states have dropped the program because students were not eating the healthier foods.[40] Schools that choose to participate in the HHFKA should also make a commitment to include culturally-appropriate food options that meet the new standards, while providing education about the new options. Serving meals that reflect the norms of the community, such as vegetarian, kosher/halal, and other meals that children are likely to be familiar with, can help ensure that children will eat at

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school. Much of Bienestar's success is due to the fact that the program worked within the local cultural norms while educating and empowering students to make healthy meal choices.

- Additionally, there are few contractors available to provide culturally-appropriate meals that are affordable and meet USDA standards. Schools could host contests where community members with knowledge of food preparation and culturally-appropriate meals create recipes that conform to the budget and USDA requirements.

Space for Innovation

- Emerging research shows that schools that go above and beyond the USDA standards, compared to those that meet the minimum standards, see a smaller difference in obesity rates between students who are on free/reduced lunch and those who pay full price or bring lunch from home. State and school district grants should be available to implement evidence-based programs, such as the Bienestar and NEEMA models. Making a space where innovative, local and culturally-tailored programs can thrive in schools is one way in which local communities can make the best choices for their schools and positively affect health outcomes.

Conclusion

In a time where healthcare costs are soaring and school district budgets are shrinking, thoughtful allocation of resources is exceedingly crucial. Children, especially Latino children, in the United States are at risk for obesity-related diseases at an unparalleled rate. In order to ensure that Latino children are given a fair chance at living a healthy life, school districts must encourage schools to get the most dollars out of participating in federally-funded nutrition programs, such as the NSLP and HHFKA, while also ensuring that children are actually benefitting from these programs. Meeting the minimum standards of these federal programs is a good start, but it is not enough. Schools need to go above and beyond the minimum standards in order to make sure that the campus reflects the community it serves, while also inspiring innovation in its nutrition and education programs.

Notes

[a] According to the Centers for Disease Control and Prevention (CDC), overweight is defined as an adult who has a BMI (Body Mass Index) between 25 and 29.9. An adult who has a BMI of 30 or higher is obese.

[b] The terms of "Hispanic" and "Latino" are used interchangeably in this brief and by the US Census Bureau to refer to persons of Mexican, Puerto Rican, Cuban, Central and South American, Dominican, Spanish, and other Hispanic descent; they may be of any race. Unless otherwise noted, estimates do not include the 3.9 million residents of Puerto Rico.

[c] P.L. 88-525

[d] 79 P.L. 396, 60 Stat. 230

[e] Unless otherwise noted, all Bienestar program descriptions and information are from: Treviño RP, Yin Z, Hernandez A, Hale DE, Garcia OA, Mobley C. Impact of the Bienestar School-Based Diabetes Mellitus Prevention Program on Fasting Capillary Glucose Levels: A Randomized Controlled Trial. Arch Pediatr Adolesc Med. 2004;158:911-917.

Endnotes

1 http://www.hsph.harvard.edu/obesity-prevention-source/obesity-trends/obesity-rates-worldwide/

2 Flegal, 2012

3 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5827a2.htm

4 Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. JAMA. 2012;307:491-7. http://www.ncbi.nlm.nih.gov/pubmed/22253363

5 Pew Charitable Trusts, Robert Wood Johnson Foundation. (2013). Serving Healthy School Means: Despite challenges, schools meet USDA meal requirements; "QuickStats: Prevalence of Overweight Among Children and Teenagers, by Age Group and Selected Period—United States, 1963-2002," Morbidity and Mortality Weekly Report 54, no. 8 (2005): 203.

6 Flegal, 2012

7 Ibid.

8 U.S. Surgeon General. Overweight and obesity: Health consequences. Rockville: MD; 2001. www.surgeongeneral.gov

9 Pew 2013; J.C. Han, D.A. Lawlor, and S.Y. Kimm, "Childhood obesity," Lancet 375, no. 9727 (2010): 1737–48

10 http://cdn.missionreadiness.org/MR_Too_Fat_to_Fight-1.pdf

11 Cawley J, Meyerhoefer C. The medical care costs of obesity: an instrumental variables approach. J Health Econ. 2012; 31:219-30. http://www.ncbi.nlm.nih.gov/pubmed/22094013

12 Wang CY, McPherson K, Marsh T, Gortmaker S, Brown M. Health and economic burden of the projected obesity trends in the USA and the UK. Lancet. 2011; 378:815-25. http://www.ncbi.nlm.nih.gov/pubmed/21872750

13 Thompson D, Edelsberg J, Colditz GA, Bird AP, Oster G. Lifetime health and economic consequences of obesity. Arch Intern Med.1999; 159:2177–83. http://www.ncbi.nlm.nih.gov/pubmed/10527295?dopt=Citation

14 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5827a2.htm

15 http://minorityhealth.hhs.gov/templates/content.aspx?lvl=2&lvlID=54&ID=3324

16 http://www.nclr.org/images/uploads/publications/FastFacts_LatinosandHealthCare2012.pdf

17 Flegal, 2012

18 McKenzieTL, Sallis JF, Nader PR, Broyles S, Nelson JA. Anglo- and Mexican-American preschoolers at home and at recess: activity patterns and environmental influences. J Dev Behav Pediatr. 1992; 13: 173-180.; Wolf AM, Gortmaker SL, Cheung L, Gray HM, Herzon DB, Colditz GA. Activity, inactivity, and obesity: racial, ethnic, and age differences among schoolgirls. Am J Public Health. 1993; 83:1625-1627.; Trevino RP, Marshall RM, Hale DE, Rodriguez R, Baker G, Gomez J. Diabetes risk factors in low-income Mexican-American children. Diabetes Care. 1999;22: 202-207.

19 Krebs-Smith SM, Cook AD, Subar AF, Cleveland L, Friday J, Kahle LL. Fruit and vegetable intakes of children and adolescents in the United States. Arch Pediatr Adolesc Med. 1996;150:81-86.

20 http://www.fns.usda.gov/pd/34snapmonthly.htm

21 http://www.cbpp.org/cms/?fa=view&id=3805

22 The SNAP Vaccine: Boosting Children's Health," Children's HealthWatch Report, February 2012, http://www.childrenshealthwatch.org/upload/resource/snapvaccine_report_feb12.jpg.pdf

23 http://www.fns.usda.gov/sites/default/files/NSLPFactSheet.pdf

24 Ibid

25 Ibid

26 http://www.roscoe.esc14.net/users/0001/docs/USDA%20Final%20Rule%20Nutritional%20Information.pdf

27 Ibid

28 http://www.fns.usda.gov/sites/default/files/NSLPFactSheet.pdf

29 Briefel RR, Wilson A, Gleason PM. Consumption of low-nutrient, energy-dense foods and beverages at school, home, and other locations among school lunch participants and nonparticipants. J Am Diet Assoc 2009;109: Suppl-90.; Robert Wood Johnson Foundation. (2012). Influence of competitive food and beverage policies on children's diets and childhood obesity. Retrieved from http://www.rwjf.org/content/dam/farm/articles/articles/2012/rwjf400047

30 http://www.census.gov/newsroom/releases/archives/facts_for_features_special_editions/cb11-ff15.html

31 http://www.pewhispanic.org/2012/08/20/hispanic-student-enrollments-reach-new-highs-in-2011/

32 Newman C, Ralston K. Profiles of Participants in the National School Lunch Program. (2006). Alexandria, VA: Economic Research Service, U.S. Department of Agriculture. http://www.ers.usda.gov/publications/eib17/eib17.pdf; National Council of La Raza. Profiles of Latino Health: A Closer Look at Latino Child Nutrition (Issue 10: Hispanic Participation in School-Based Nutrition Programs). 2010. Retrieved from http://www.nclr.org/images/uploads/pages/Jan12_Profiles_Issue_10.pdf

33 http://www.tea.state.tx.us/index2.aspx?id=2147483874&menu_id=2147483656

34 http://minorityhealth.hhs.gov/templates/content.aspx?ID=6456

35 Knittle JL, Timmers K, Ginsberg-Fellner F, Brown RE, Datz DP. The growth of adipose tissue in children and adolescents. J Clin Invest. 1979;63:239-246.

36 Perri MG, McAllister DA, Gange JJ, Nezu AM. Effects of four maintenance programs on the long-term management of obesity. J Consult Clin Psychol. 1988;56:529-534.

37 See http://www.nytimes.com/2014/01/30/science/obesity-takes-hold-early-in-life-study-finds.html?_r=1 for a summary of emerging research on early childhood obesity.

38 National Council of La Raza. 2010

39 Crystal Weedall Fitz Simmons, James D. Weill, and Lynn Parker, Barriers That Prevent Low-Income People From Gaining Access to Food and Nutrition Programs (Washington, DC: Food and Research and Action Center, n.d.), http://www.hungercenter.org/pdf/Barriers%20to%29Food%20and%20Nutrition%20Programs,%20FRAC.pdf (accessed October 2010).

40 http://healthland.time.com/2013/08/29/why-some-schools-are-saying-no-thanks-to-the-school-lunch-program/