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HISPANIC OBESITY INITIATIVE

HISPANIC OBESITY: AN AMERICAN CRISIS



2010 POLICY BRIEF

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HISPANIC OBESITY: AN AMERICAN CRISIS

FROM SENATOR IRIS Y. MARTINEZ (IL)

NHCSL President

DEAR COLLEAGUES:

Since its founding, NHCSL has been a leader in addressing Latino health disparities. Hispanic state legislators, working on the ground in states across the country, have worked in concert to identify policy solutions to our most challenging concerns – especially those leading to reduced quality of life for Latino families and children. The Latino obesity crisis must engender a national call to action to reclaim the health and well-being of our communities.

Latino obesity is not just about esthetic concerns. With raising obesity comes an increase in morbid diseases including heart disease, diabetes and cancer – all of which are already overrepresented among Latino communities and cause early death.

Obesity is also connected to our ongoing state and federal fiscal concerns. Each of us who work to balance a budget each year know first-hand the concerns over ballooning health care costs, and the concerns that these costs will contribute to unmanageable debt and deficits well into the future. And so, our investments of resources today can have dramatic impact on the future of our governments and our communities.

It is my hope that this paper and its accompanying documents open, or reopen conversations about the urgency in tackling Hispanic obesity to make America stronger. If we all commit to raising awareness of this issue, and including this concern in our policy making, we will undoubtedly be successful in making our communities healthier and more productive for the future.

Special thanks to Elizabeth Burgos, NHCSL's Executive Director and Jason Llorenz, Esq. for your leadership in developing this policy brief.

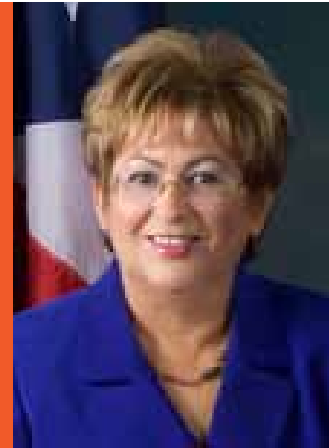
In partnership,



Senator Iris Y. Martinez



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FROM SENATOR LUZ ARCE FERRER (PR)
Chair, NHCSL Health Taskforce

DEAR COLLEAGUES:

As Chair of NHCSL’s health taskforce, I call upon my colleagues in state legislatures and others who will read this brief, to take up action, and reignite our commitment to address the Latino obesity crisis. Among all the challenges our communities face, obesity is both personally devastating, and an indicator of reduced quality of life. For Latinos, who suffer morbid obesity at alarming rates, along with so many of the related diseases – quality of life has been lessened along with productivity. This crisis must be addressed for the sake of our continued progress.

This policy brief presents the beginnings of a roadmap of recommendations from NHCSL’s legislators, who, working together at our obesity summit in April of 2010, identified opportunities for policies and programs that can help to engage our communities in this issue, provide resources when lacking, and raise awareness of the crisis in order to take action.

Our paper is not intended to be treated as a static research dissertation. It is a call to action. This may include working with families in your district to use local resources, or passing laws that mirror the recommendations contained here.

May we all have success in battling this crisis, so that our communities may continue to grow in social, economic and civic influence.

With regards,

Senator Luz Arce Ferrer (PR)

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NATIONAL HISPANIC CAUCUS OF STATE LEGISLATORS
(NHCSL)

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4 5

HISPANIC OBESITY: AN AMERICAN CRISIS



The National Hispanic Caucus of State Legislators (NHCSL) is the preeminent organization representing the interests of 300 Hispanic state legislators from all states, commonwealths, and territories of the United States. Founded in 1989 as a nonpartisan, nonprofit 501(c)3, NHCSL is a catalyst and advocate for joint action on issues of common concern, such as health, education, immigration, homeownership and economic development to all segments of the Hispanic community. NHCSL also works to design and implement policies and procedures that will impact the quality of life for Hispanic communities; serves as a forum for information exchange and member networking; an institute for leadership training; a liaison with sister U.S. Hispanic organizations; a promoter of public/private partnerships with business and labor; and a partner with Hispanic state and provincial legislators and their associations representing Central and South America.

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6 7



TABLE of CONTENTS

<i>NHCSL Executive Committee</i>	2
<i>Letter from Senator Iris. Y. Martinez</i>	3
<i>Letter from Senator Luz Arce Ferrer</i>	4
<i>Introduction</i>	8
BACKGROUND	8
<i>The Latino Obesity Crisis</i>	10
<i>Obesity-Related Health Disparities in the Latino Population</i>	12
DIABETES	13
HYPERTENSION	14
OTHER HEALTH RISKS	14
<i>Obesity's Cost</i>	15
ECONOMIC IMPACT OF OBESITY IN THE LATINO COMMUNITY	15
FINANCIAL BURDEN	17
BURDEN TO STATES	20
<i>Barriers and Challenges for Latinos</i>	22
SCHOOL NUTRITION AND EDUCATION	23
ACCESS TO PARKS AND GREEN SPACE	23
ACCESS TO HEALTH CARE	25
<i>Intervention Strategies</i>	27
TEXAS	27
MISSISSIPPI	28
LEGISLATORS RECOMMENDATIONS	30
<i>Conclusion</i>	31
<i>Appendix</i>	32
<i>References</i>	40



INTRODUCTION

Obesity¹ is a national epidemic with wide consequences and cost to America's health and productivity. In 2003, Surgeon General Richard Carmona described the nation's obesity epidemic as a national crisis.² More recently, the Center for Disease Control and Prevention (CDC) found that in 2009, two-thirds of adults and nearly one in three children were overweight or obese.³ For Latino communities, the obesity epidemic has reached crisis, with many states and communities reporting Latino obesity at staggering proportions, with Latino children becoming obese earlier in their lives.

In this policy brief, we focus on the obesity crisis afflicting the U.S. Latino population. The first section compares trends of obesity rates in the U.S. for Latino adults and children. The second section delves into the health consequences of obesity and health-related disparities within the Latino community. The third section identifies health care costs attributed to obesity and their impact on Latinos and states. The fourth section outlines the barriers and challenges for Latinos struggling with obesity. Finally, the fifth section presents two states (Texas and Mississippi) as state models that have proposed legislation (1) mandating the coverage of obesity treatments for state employees, and (2) promoting educational nutrition programs for their respective Latino populations.

Much of the available federal government data focuses on the Mexican-American population as a subgroup within the Latino community. Unless otherwise noted, obesity rates observed in Hispanics of Mexican origin are assumed to be comparable to rates observed in the general Latino population. While the data can be used to interpret and denote trends in the Latino community, it may not always reflect the entire U.S. Latino population or specific regional or geographic sub-populations.

Background

Latinos are projected to represent 24.4% of the total U.S. population by 2050, representing nearly half the size of the projected non-Hispanic white population.⁴ Some states traditionally have higher Latino populations (e.g., California, Texas, New York, Florida, and Illinois); however, states with fewer Latino residents, such as North Carolina, Arkansas, and Georgia, have experienced substantial increases in the Hispanic population percentage within the last decade.⁵

Over a 30-year period, the percentage of the population who are overweight or obese has grown substantially (see Tables 1 and 2).⁶ The obesity epidemic is affecting millions of Americans (including Latinos) and contributing to increasing health care costs.

1 U.S. Department of Health and Human Services defines obesity as an excess body fat for an individual having a body mass index (BMI) of 30 kg or greater. Overweight is defined as a BMI of greater than or equal to 25 kilograms/m².

2 U.S. Department of Health and Human Services. The Obesity Crisis in America. Prepared testimony before the Subcommittee on Education Reform Committee on Education and the Workforce United States House of Representatives; U.S. Department of Health and Human Services, Office of the Surgeon General, July 2003. Retrieved March 15, 2010, from <http://www.surgeongeneral.gov/news/testimony/obesity07162003.htm>

3 U.S. Department of Health and Human Services. The Surgeon General's Vision for a Healthy and Fit Nation. Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General, January 2010. Retrieved March 15, 2010, from <http://www.surgeongeneral.gov>.

4 U.S. Census Bureau. U.S. Projections by Age, Sex, Race, and Hispanic Origin. Washington, DC: U.S. Census; 2004.

5 U.S. Census Bureau. The Hispanic Population: Census 2000 Brief. Washington, DC: U.S. Census; 2001.

6 U.S. Centers for Disease Control and Prevention, National Center for Health Statistics. Health, United States, 2003. Atlanta, GA: U.S. Department of Health and Human Services, 2003. 4 Center on Budget and Policy Priorities. "The Long-Term Fiscal Outlook is Bleak: Restoring Fiscal Sustainability Will Require Major

HISPANIC OBESITY: AN AMERICAN CRISIS

After African-Americans, Latinos have the second highest obesity prevalence among adults (HHS, 2009). States need to proactively reduce obesity rates for the nation's largest and fastest growing ethnic minority. Only one-sixth of the Latino population is 55 and above.⁷ Half of the population is between the ages of 18 and 54 years of age,⁸ and one-third is under the age of 18.⁹ Increasing rates of obesity in Latino children suggest that, unless policy-makers take action, the subsequent generation will be less healthy as it ages, affecting, among other things, health care costs.



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Changes to Programs, Revenues, and the Nation's Health Care System." <http://www.cbpp.org/cms/index.cfm> (accessed March 16, 2010).

7 U.S. Census Bureau. 2006-2008 American Community Survey 3-year Estimate, Selected Population Profiles.

8 U.S. Census Bureau. 2006-2008 American Community Survey 3-year Estimate, Selected Population Profiles.

9 U.S. Census Bureau. 2006-2008 American Community Survey 3-year Estimate, Selected Population Profiles.



HISPANIC OBESITY: AN AMERICAN CRISIS

THE LATINO OBESITY CRISIS

According to the U.S. Census, as of July 1, 2008, an estimated 47 million Hispanics represent 15% of the U.S. population, including Puerto Rico.¹⁰ In stark contrast to the non-Hispanic white population, Latinos are experiencing an increase in obesity prevalence. As reported by the Department of Health and Human Service's Office of Minority Health, in 2007, Latinos were 1.1 times more likely to be obese than non-Hispanic whites. In 2003-2006, Mexican-American women were 30% more likely to be overweight than non-Hispanic white women (USHHS). According to the U.S. Census 67% of Hispanics have a high school degree or less schooling and earn an annual per capita income of \$15,916.

In comparing overweight rates, which include obesity rates, Latinos surpassed the general population by ten percentage points (see Tables 1 and 2). In comparison to the general female population (61.2%), Mexican-American women (73%) have a greater overweight or obese percentage (see Table 1). The National Center for Health Statistic's National Health and Nutrition Examination Survey (NHANES) found that grouped datasets of 20- to 74-year-olds in 1976-1980 and 2003-2006 increased from 47% to 67% for the general population and from 61% to 75% for Latinos (see Table 1). During this thirty-year trend period, obesity and

overweight rates for Latino males and females increased equally, compared to the general population (males and females of all races).

The CDC reported Latinos as the minority group with the second-highest obesity prevalence in adults. Additionally, the Office of Minority Health in 2007, reported adult Latinos 18 years of age and over to be 1.2 times more likely to be overweight than non-Hispanic whites. (A person is considered to be overweight if he or she has a body mass index (BMI) of 30% or greater.) This demonstrates Latino adults to be disproportionately obese and overweight compared to the general population (mainly non-Hispanic whites).

Childhood and adolescent overweight and obesity rates show sharply increasing trends that surpass rates for adults (see Table 2). In 2001-2004, the office of Minority Health reported Latino children 6-11 years of age to be 1.3 times more likely to be overweight than non-Hispanic white children in the same age group. The NHANES survey also found that the percentage of obese or overweight 6- to 11-year-olds increased from about 7% to 17% in the general population and from 12% to 24% on average for Latinos.

A more staggering pattern emerges for 12- to 19-year-olds. Over the same time period, the percentage of overweight adolescents increased from 5% to about 18% in the general population and 8% to 21% on average for Latinos (see Table 2). Unfortunately, these trends do not appear to be diminishing. This should be a prioritized concern for legislators, given that obese children and children of obese parents tend to become obese adults.^{11,12,13}

Preventative measures and nutritional care should start at an early stage to mitigate overweight problems and other obesity-related health conditions. Studies have shown that babies born to obese mothers, babies who are not breastfed, and babies who consume excessive calories during their first year are more likely to become obese and develop chronic diseases later on in life (Dr. Perez-Escamilla). Latinos, more than other demographics, tend to develop problems with weight early in life.

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¹⁰ U.S. Census Bureau, Facts for Feature: Hispanic Heritage Month Sept 15-Oct 15
http://www.census.gov/PressRelease/www/releases/archives/facts_for_features_special_editions/013984.html

¹¹ Serdula MK, Ivery D, Coates RJ et al. Do obese children become obese adults? A review of the literature. *Prev Med* 2003; 22:167-177.

¹² Strauss RS, Pollack HA. Epidemic increase in childhood overweight, 1986-1998. *JAMA*, 2001; 286:2845-2848

¹³ Ogden CL, Flegal KM et al. Prevalence and trends in overweight among U.S. children and adolescents, 1999-2000. *JAMA*, 2002; 288:1728-1732.



OBESITY-RELATED HEALTH DISPARITIES IN THE LATINO POPULATION

The Office of Minority Health reported that overweight people are more likely to suffer from high blood pressure and have high levels of blood fats or bad cholesterol — all risk factors for heart disease and stroke. In fact, Heart disease is the leading cause of death for Latinos; however, many Latinos are unaware they are at risk. In 2003, only 27% of Hispanic females said they knew that heart disease was a major health problem for women. In comparison, 55% of non-Hispanic white females said they were aware of the risk.

The CDC reported the top ten causes of death in the Latino community, many of which are obesity-related diseases.¹⁴ Overall life expectancy for Latinos is declining as a result of obesity and obesity-related health risks (see Table 3).^{15,16} Table 3 shows the top ten causes of death in the general population compared to Latinos; at least half of the contributing factors of death, both in the general population and for Latinos, can be linked to obesity.

Common morbidities associated with obesity include coronary heart disease, hypertension, stroke, diabetes, certain types of cancer (e.g., endometrial, breast, and colon)¹⁷, as well as other secondary medical effects (e.g., gallbladder diseases, sleep apnea and respiratory problems).¹⁸

In addition to chronic diseases associated with being overweight, mood instability, depression (or shame), and low self-esteem affect obese individuals; those factors put additional strain on individuals who are already suffering from mental illnesses.¹⁹ According to the Surgeon General's Vision for a Healthy and Fit Nation report, people with mental health disorders are susceptible to obesity risk factors given their social

HISPANIC OBESITY: AN AMERICAN CRISIS

isolation, sedentary life styles and physical inactivity. In addition, they have a shorter life expectancy, living only until 53 years of age on average.²⁰

Studies have shown that Latinos often have conflicting attitudes toward seeking mental health services, and many feel stigmatized for doing so (APA). According to the American Psychiatric Association, Latinos use mental-health services far less than other ethnic and racial groups.

Hispanic youth are at a higher risk for poor mental health than white youth. They have higher rates of depressive, anxiety, suicidal ideation and suicide attempts (USHHS-SAMHSA). This could correlate with high levels of depression, feelings of shame and low self-esteem, symptoms that often afflict obese individuals.

Diabetes

More than 200,000 people each year die from diabetes-related complications.²¹ Over 17 million Americans have diabetes; 90% of these have type 2 diabetes, which is associated with obesity and physical inactivity.²²

Approximately 8% of U.S. adults have type 2 diabetes, a disease that increases the risk for cardiovascular disease, stroke, kidney disease, blindness, and lower limb amputation, among other problems.²³ As of 2006 CDC data, Latinos were 1.5% more likely to die from diabetes than the general population. NHANES data shows that from 1988-1994 to 2003-2006 the general diabetic population 20 years of age and older went from 8% to 10.2%, while it increased from 14.2% to 15.7% for Latinos (see Table 4). The disparity suggests that diabetes is a highly pressing medical issue for the Latino community; it is the fifth leading cause of death for Latinos.

According to the Obesity Society, type 2 diabetes is usually diagnosed after age 40; however, it is now being found in all age groups, including children and adolescents.

According to the Surgeon General's report, Vision for a Healthy and Fit Nation, released in January 2010, type 2 diabetes in children has increased, particularly for Latino children. More than 75% of children and adolescents with type 2 diabetes are obese. This is of particular concern given that childhood obesity has increased for Latino children.

¹⁴ The Center for Disease Control and Prevention (CDC): Office of Minority Health and Health Disparities (OMHD) accessed from statistics, <http://www.cdc.gov/omhd/populations/hl/hl.htm#ten>

¹⁵ National Heart, Lung, and Blood Institute. Clinical guideline on the identification, evaluation, and treatment of overweight and obesity in adults: the evidence report. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute; 1998. Available at http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.htm.

¹⁶ U.S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease obesity. Rockville, MD: U.S. Department of Health and Human Services, U.S. Public Health Service, Office of the Surgeon General; 2001. Available at <http://www.surgeongeneral.gov/topics/obesity/calltoaction/CalltoAction.pdf>

¹⁷ The Center for Disease Control and Prevention (CDC): Overweight and Obesity Health Consequences, retrieved from <http://www.cdc.gov/obesity/causes/health.html>

¹⁸ The Center for Disease Control and Prevention (CDC): Overweight and Obesity Health Consequences, retrieved from <http://www.cdc.gov/obesity/causes/health.html>

¹⁹ U.S. Department of Health and Human Services. The Surgeon General's Vision for a Healthy and Fit Nation. Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General, January 2010.

²⁰ National Association of State Mental Health Program Directors. Obesity and Prevention Strategies for Individuals with Serious Mental Illness, Technical Report 2008.

²¹ The Obesity Society: The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adult: Retrieved from <http://www.obesity.org/information/practicalguide.asp>.

²² The Obesity Society: The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adult: Retrieved from <http://www.obesity.org/information/practicalguide.asp>.

²³ U.S. Department of Health and Human Services. The Surgeon General's Vision for a Healthy and Fit Nation. Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General, January 2010.

Hypertension

One of the most critical contributing factors to heart disease is hypertension (or high blood pressure), which can be related to obesity. Hypertension, a health risk factor for heart disease and stroke, can lead to premature death and disability from cardiovascular complications.²⁴

According to the CDC, hypertension awareness among Latinos is critically low. As a result, Latinos are less likely than non-Hispanic whites to effectively manage their hypertension and pursue preventive care. Latino females, particularly, have high levels of hypertension and are more likely to have heart complications as a result.

Other Health Factors

According to the Surgeon General's Vision for a Healthy and Fit Nation report, stress also contributes to excessive weight and obesity. Stress adversely affects blood pressure and cholesterol levels and may lead people to increase their caloric intake, while limiting physical activity.

Obesity is a known risk factor for the development and progression of osteoarthritis of the knee and other joints. Obese adults are up to four times more likely to develop osteoarthritis of the knee than adults with normal BMIs.²⁵ According to a Trust for America's Health report, an estimated 24.2% of kidney disease cases among men and 33.9% among women are related to obesity or being overweight.²⁶ In the same report, approximately 20% of cancer cases in women and 15% of cancer cases in men were linked to obesity.

Latinos have increased rates of obesity-related conditions, especially diabetes, hypertension and heart diseases. These obesity-related health complications are also leading causes of death for Latinos. Also, the lack of access to health care, preventative care, and treatment could be detrimental to addressing obesity-related health disparities in the Latino community.

24 The Center for Disease and Prevention Control (CDC). Hypertension –Related Mortality Among Hispanic Subpopulations U.S. 1995–2002. MMWR 2006 55/177-180.

25 Felson, D.T., and Y. Zhang. "An Update on the Epidemiology of Knee and Hip Osteoarthritis with a View to Prevention." Arthritis and Rheumatism 41, no. 8 (1998):1343–1355.

26 F as in Fat 2009 report, issued by the non-profit Trust for America's Health in partnership with the Robert Wood Johnson Foundation.

HISPANIC OBESITY: AN AMERICAN CRISIS



OBESITY'S COST

Economic Impact of Obesity in the Latino Community

Obesity and its health-related conditions pose a disproportionate economic burden in health care costs for many states throughout the country. Additionally, many Latino and American families struggle to cover their individual and family health care costs. Many of these families can not afford health insurance, making treatment and access to care unavailable for some of the most pressing obesity-related chronic diseases impacting Latinos. Many Latino families may lack access to care and treatment, while many states may be falling behind on methods to provide medical treatments for obesity and educational initiatives to help reduce obesity rates in this country.

Obesity can negatively affect productivity in the workplace. Obese individuals in poor health can be less productive at work than other, healthier workers.²⁷ For example, many have argued that high rates of absenteeism, and other indirect costs for employers, can be attributed to obesity. For example, obese employees may work in spite of illness. This can increase worker compensation claims, making it more costly for employers to retain obese workers.²⁸

Some have argued that obesity could limit employment opportunities and may lead to discrimination.²⁹ Reported discrimination based on weight has increased 66% in the past decade, up from about 7% to 12% of U.S. adults, according to the International Journal of Obesity. Another study reported discrimination against obese persons to be commonplace in institutional and interpersonal settings — in some cases, it was more prevalent than rates of discrimination based on gender and race.

27 Pronk, N. P., B. Martinson, R. C. Kessler, A. L. Beck, G. E. Simon, and P. Wang. "The Association between Work Performance, and Physical Activity, Cardio-respiratory Fitness, and Obesity." Journal of Occupational and Environmental Medicine 46, no. 1 (2004): 19–25.

28 Trogdon, J.G., E.A. Finkelstein, T. Hylands, P.S. Dellea, and S.J. Kamal-Bahl. "Indirect Costs of Obesity: A Review of the Current Literature." Obesity Reviews 9, no. 5(2008):489–500.

29 Puhl R, Brownell KD. (2001). Bias, discrimination, and obesity. Obesity Research, 9:788–805.

HISPANIC OBESITY: AN AMERICAN CRISIS

While studies have shown that obesity is costly for states (e.g., health care costs), it could also be costing already-struggling American families. Individuals without health insurance, for example, must pay out of pocket for health care. Employers in the private and government sectors are incurring increased expenses from increasing obesity-related care.

New research suggests that obesity care is twice as costly as previously estimated.³⁰ In 2009, federal health officials estimated that obesity-related health care costs reached 9% of total medical costs. However, in October 2010, the National Bureau of Economic Research estimated that 17% of national medical costs can be attributed to obesity.

Many industries are improving their human resources policies to assist overweight individuals. This includes developing workplace programs that help to promote behavior change and increase employee morale and safety, while assisting with the interaction of co-workers in the workplace. The CDC and the National Institutes of Health (NIH) released several guidelines and proposed strategies to control and prevent weight gain in the workplace in order to motivate and sustain efforts of workers to prevent weight gain and promote weight control.

Obesity has also affected our nation's military forces, limiting the pool of qualified military recruits. About 75% of the country's 17- to 24-year-olds are ineligible for military service; nearly half of that number is ineligible because of medical or physical conditions, such as obesity, asthma, or diabetes (Department of Defense). Obesity alone seems to be a major and more frequent reason for enlistment ineligibility. One study estimates that between 25% and 35% of young males would not meet the weight requirements for at least one of the services (Asch et al., 2009), a percentage that is likely to grow given rising obesity rates among American adolescents (CDC).

Latinos are underrepresented in our nation's military services. As of 2001, 9.5% of enlisted service members were Latinos compared to 62% who were non-Hispanic whites. According to a study supported by the U.S. Army Research Institute for the Behavioral and Social Sciences, Latino enlistments are highest in the Marine Corps at 15%, while only 6% of Latinos were enlisted in the Air Force, with rising trends in the Navy (Wechler Segal & R. Segal).



Obesity could also be costly for the military (e.g., fitness trainings and promoting educational initiatives for recruitment practices). Some active members in the military are obese, as reported by the Defense Department. The Navy estimates that 62% of its members are overweight and 17% are obese, while the U.S. Air Force reports 55% of airmen are overweight and nearly 12% are obese. Service members who exceed height-weight guidelines for their branch of the military are often discharged.

As of 1995, the Defense Department reported an estimated average cost of recruiting and training a replacement enlisted member to be \$40,283, or \$56,782 in 2008 inflation-adjusted dollars. This costs the Department of Defense between \$170 million and \$284 million a year and does not include additional obesity-related medical expenses.³¹

The rise in obesity rates also raises health care costs, a burden bore by employers, individuals, and the military service. The obesity crisis in America must be addressed from a national perspective in order to influence health care coverage statewide. Moving forward, preventative policies will require increases in state budgets and legislative mandates to promote initiatives to cover health care costs for obesity and its health-related conditions.

Financial Burden

Obesity and its complications burden health care at the state and federal levels. According to a 2002 study, obesity is more costly to America's health care than smoking and drinking. Overweight people spend 36% more on health care services and on medication 77% in comparison to a 21% and 28% increase in health care spending relating medication costs for current smokers and smaller health effects for problem drinkers.³² Overweight and obesity national expenditures accounted for 9.1% (or \$78.5 billion) of the total annual U.S. medical expenditures in 1998. Estimates projected 92.6 billion dollars for 2002.³³ Approximately half of these costs were paid by Medicaid and Medicare on health-related obese and overweight conditions.

According to Finkelstein, Fiebelkorn and Wang, in the study measuring obesity expenditures across states, roughly one-half of these costs are financed by Medicare and Medicaid. In comparison, the study found that obesity prevalence among Medicare recipients and the percentage in Medicare costs related to obesity are similar to the expenditures of the private insured population versus Medicaid recipients who reported a 50% higher than that for the general population in treatment care obesity related among adults. This demonstrates that Medicaid enrolls a greater percentage of overweight people and incurs higher costs when compared to Medicare recipients.

Medicare and Medicaid are administered by the Centers for Medicare and Medicaid Services (CMS), a component of the Department of Health and Human Services (HHS). Medicaid provides health care insurance to qualified individuals who are low income families and children. Medicare provides health

³⁰ John Cawley and Chad Meyerhoefer, "The Medical Care Costs of Obesity: An Instrumental Variables Approach," National Bureau of Economic Research, Working Paper No. 16467, October 2010.

³¹ U.S. Department of Defense Pharmacoeconomic Center. "Pharmacoeconomic Analysis of Obesity Treatment." PEC Update 97, no. 5 (1997): 1-17. Accessed from <http://www.pec.ha.osd.mil/Updates/97%20PDFs/97->

³² Journal Study on Health affairs: Health Affairs, published by Project HOPE, is a bimonthly journal devoted to publishing the leading edge in health policy thought and research

³³ Finkelstein, Erica, Fiebelkorn Ian C, & Wang Guijing. National Medical Spending Attributable to Overweight and Obesity: How Much and Who's Paying?

HISPANIC OBESITY: AN AMERICAN CRISIS

insurance coverage to elderly citizens sixty five of age and disabled Americans who qualify by a meeting criteria set by the social security administration.³⁴ The percentage of people with Medicaid coverage (13.2 percent) and the percentage of people covered by Medicare (13.8 percent) were higher in 2007 than in 2006—12.9% and 13.6%, respectively. The number of people insured by Medicaid and Medicare also increased—to 39.6 million by Medicaid and 41.4 million by Medicare.³⁵

According to CMS roadmap overview on health insurance, nearly 90 million Americans rely on health care benefits through Medicare, Medicaid, and the State Children's Health Insurance Program (SCHIP). CMS reported that health care today represents one-seventh of the economy with spending totaling more than \$2 trillion annually. By 2017, the nation is expected to spend roughly \$4 trillion on health care: 21% of gross domestic product while Medicare and Medicaid costs continue to skyrocket including covering for obesity health-related conditions.

The estimated projections for health care costs attributable to obesity and overweight adults are predicted to more than double every decade. By 2030 health care costs attributable to obesity and overweight could range from \$860 billion to \$956 billion, which would account for 15.8% to 17.6% of total health care costs or one in every six dollars.³⁶ Additionally, a 2008 study reported that obese employees cost private employers approximately \$45 billion a year as a result of medical expenses and excessive absenteeism.³⁷

Although these projections measure health care expenditures nationally, the data do not take into account the uninsured population who lack adequate access to health care. This highly impacts the Latino population. According to CDC data people of Mexican origin are more likely than those in other racial or ethnic groups to be uninsured for more than 12 months. As of 2005, the CDC reported data on health care expenditures where it found that Latinos spend an average of \$2,200 per person in health care costs and prescription medicines. In comparison, the general population spends \$4,082 double that amount close to (84.7%) in health care costs. This demonstrates the lack of health care coverage and medical treatment among Latinos, therefore, prolonging un-treated obesity health risk conditions.



Additionally, there is a strong correlation with the uninsured population and the undocumented immigrant population in this country. Latinos comprised a large segment of the undocumented immigrant population. According to the U.S. Census data as of 2007, the number of uninsured Hispanics was close to 14.8 million a (32%) in comparison to the uninsured non-Hispanic whites of 10.4% close to 20.5 million. Additionally, poverty levels below the federal income of 100% among Latinos also increased from 20.6% in 2006 to 21.5% in 2007 in comparison to the non-Hispanic whites of 8.2%. As more data and information become available regarding Latino subgroups there could be differences in the lack of insurance coverage and the type of coverage among Latino subgroups. For example, Mexican Americans had by far the highest percentage (37.6%) of individuals without health insurance which may contrast to Puerto Ricans (20.4%) and Cuban Americans (23%) in the U.S. (Office of Minority Health, HHS 2004).

Given the correlation among Latinos and the undocumented immigrant population residing in the U.S. one could presumed that Latinos do not have health insurance or lack treatment care because they often work in agricultural labor, construction, domestic service, and other industries, that generally do not provide health insurance coverage. Others may work for small firms without unions or consider to be employed on a part-time basis without health care coverage benefits. The lack of access and affordable medical treatment may also correlates with the high levels of obesity health-related risks among Latinos such as diabetes, hypertension, and heart diseases.



³⁴ U.S. Census. Income, Poverty, and Health Insurance Coverage in the United States 2007. Accessed from <http://www.census.gov/prod/2008pubs/p60-235.pdf>

³⁵ U.S. Census. Income, Poverty, and Health Insurance Coverage in the United States 2007. Accessed from <http://www.census.gov/prod/2008pubs/p60-235.pdf>

³⁶ Wang, Y., M.A. Beydoun, L. Liang, B. Caballero, and S.K. Kumanyika. "Will All Americans Become Overweight or Obese? Estimating the Progression and Cost of the U.S. Obesity Epidemic." *Obesity* 16, no. 10 (2008): 2323-2330.

³⁷ Rosen, B. and L. Barrington. *Weights & Measures: What Employers Should Know about Obesity*. New York, NY: The Conference Board, April 2008.

HISPANIC OBESITY: AN AMERICAN CRISIS

The Burden To States

States bear a great deal of the financial burden of care for overweight and obese people. A study conducted in 2004 by Finkelstein, Fiebelkorn, and Wang estimated states-level expenditures attributable to obesity based on the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS, a state representative telephone survey of the adult population, tracked health risks in the U.S. from 1998 to 2000. The dramatic increase in obesity prevalence over the past three decades has been evidenced throughout the data presented the high rates of obesity, its health-related risks and the greater predisposition among Latinos when comparing to the general population. High levels of obesity prevalence lead to increases in the cost of treating obesity-related diseases. The Centers for Disease Control (CDC) found obesity-related costs ranging from about \$87 million (Wyoming) to \$7.7 billion (California). Obesity-attributable Medicare costs ranged from \$15 million (Wyoming) to \$1.7 billion (California), and obesity-attributable Medicaid expenditures ranged from \$23 million (Wyoming) to \$3.5 billion (New York). The differences in obesity-attributable expenditures among states are partly driven by the differences in the size of each state's population.³⁸

However, the CDC's 2006-2008 (BRFSS) survey found regional variances in the obesity rates of Latino adults across the country. Among Hispanic adults in 50 states and DC, the prevalence of obesity ranged from 21.0% to 36.7%, and was greater or equal to 30% in 11 states.³⁹ With the exception of Texas (32%) and Illinois (31%), the states with the highest adult Latino obesity rates do not necessarily correlate with states having the highest Latino population.

According to the CDC, in 2008, five states with large concentration of Latinos had obesity rates of 27% or higher, including Texas, Nevada, Illinois, Arizona, and Pennsylvania.⁴⁰ Five Midwestern states (Oklahoma, North Dakota, Kansas, Michigan, and Illinois), two Southern states (Texas, Tennessee), two Northeastern states (Pennsylvania, New Hampshire), and Alaska have lagged behind in meeting the needs of their respective Latino populations when it comes to reducing adult obesity. In light of these statistics, Texas has



taken a pro-active approach in reducing the obesity rates among the adult Latino population (see section on Texas's Case study).

According to the U.S. Census, as of 2000, the states with the largest Latino populations were California, Texas, New York, Florida, Illinois, Arizona, New Jersey, New Mexico, Colorado, and Washington. Latinos in California accounted for 11.0 million persons (31%) of the U.S. Hispanic population, while Texas had 6.7 million (19%). Half of the Latino population lived in California and Texas (U.S. Census 2000). The top 5 states with the highest Latino population — California, Texas, New York, Florida and Illinois — accounted for 70% of the Latino population living in the United States. Latinos in New Mexico were 42% of the total state population, the highest proportion for any state.

STATES SPENDING ON OBESITY-RELATED CARE (IN THOUSANDS), FOR THE TOP TEN HISPANIC STATES

California	\$7,675
Texas	\$5,340
New York	\$6,080
Florida	\$3,987
Illinois	\$3,439
Arizona	\$752
New Jersey	\$2,342
New Mexico	\$324
Colorado	\$874
Washington	\$1,330

The 2010 census will capture a more diverse, more widespread Latino population across the states. The estimates of adult obesity among Latinos in the top five states with dense Latino populations ranged from 26.0% in Florida to 32% in Texas, the other states include California with a 29%, New York with a 27%, and Illinois with a 30% obesity prevalence among Latino adults (See Table 7). States spending on obesity-related care (in thousands), for the top ten Hispanic states were CA (\$7,675), TX (\$5,340), NY (\$6,080), FL (\$3,987), IL (\$3,439), AZ (\$752), NJ (\$2,342), NM (\$324), CO (\$874), and WA (\$1,330) (See Table 7).

The financial burdens of obesity and its health-related conditions throughout the states should be of great concern given the fact that local governments and ultimately tax payers continue to be responsible for financing obesity and overweight-related medical costs. This analysis underlines the need for local government intervention policies to reduce and control obesity increasing rates.

³⁸ U.S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity. [Rockville, MD]: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; [2001]. Available from: U.S. GPO, Washington.

³⁹ The Center for Disease Control and Prevention (CDC): Differences in Prevalence of Obesity among Black, White, and Hispanic Adults — U.S. 2006-2008. Retrieved from <http://www.cdc.gov/feature/dsobesityadults>.

⁴⁰ The Center for Disease Control and Prevention (CDC): U.S. Obesity Trends by State 1985-2008. Retrieved from <http://www.cdc.gov/obesity/data/trends.html>



HISPANIC OBESITY: AN AMERICAN CRISIS

BARRIERS AND CHALLENGES FOR LATINOS

Latinos and their children have been particularly impacted by the growing prevalence of obesity and overweight problems. According to the Surgeon General's Vision for a Healthy and Fit Nation report, the growth in obesity is the result of many environmental factors and lifestyles. A poor diet, the lack of physical activity and eating habits can also play a role in causing people to be overweight. According to the American Obesity Association, cultural factors related to dietary choices, physical activity, and acceptance of excess weight in racial-ethnic groups interfere with weight loss efforts. Latinos could have a different approach to a variety of foods and perceived weight levels differently. Like all ethnic groups, Latinos are influenced by environmental and cultural factors that drive eating habits and physical activity.

Several studies have demonstrated that due to economic constraints, Latinos, tend to settle in low income areas, which are often saturated with fast food restaurants, mini-markets, or small grocery stores known as "bodegas." According to the U.S. Census, 11 million Latinos live below the poverty level⁴¹ — nearly 23.2% as compared to 8.2% of non-Hispanic whites.⁴² Based on these statistics, there is a strong correlation with obesity rates and socioeconomic status — being poor also correlates to greater rates of obesity (CDC).

According to the CDC, obesity rates tend to follow a socioeconomic slope and have a greater effect on racial-ethnic minorities and the poor. Food "deserts" or environments where access to healthy food is more limited contribute to poor diets and an elevated prevalence of obesity and other health-related conditions among Latinos. This is why it is much more difficult for many families, especially Latinos who live in many low income neighborhoods who have limited access to supermarkets, safe parks, and affordable fresh foods, to be physically fit and healthy.

According to a report issued by the non-profit Trust for America's Health in partnership with the Robert Wood Johnson foundation the economic downturn, will have a greater impact on the health of Americans

⁴¹ U.S. Census. Income, Poverty, and Health Insurance Coverage in the U.S. 2008. Accessed from <http://www.census.gov/prod/2009pubs/p60-236.pdf>. Office of Management Budget (OMB) determined the official definition of poverty in Statistical Policy Directive 14. U.S. Census 2008.

⁴² U.S. Census. Income, Poverty, and Health Insurance Coverage in the U.S. 2008. Accessed from <http://www.census.gov/prod/2009pubs/p60-236.pdf>.

as it relates to obesity rates. The same report stated that as food prices rise many Latino and working families "may be hard pressed to buy fresh fruits and vegetables. Instead, they will look to the cheapest foods, which aren't necessarily the healthiest".⁴³ Meanwhile the U.S. Department of Agriculture reported that prices for what it calls "food at home," a category that includes purchases at grocery stores, convenience stores and farmers' markets, will rise 2% to 3% this year. Last year, prices for food at home rose 6.4%, the highest jump in nearly two decades.⁴⁴ Food prices and access to affordable produce becomes a problem for Latinos who are low income and who are struggling to make ends meet with their families when putting food on the table.

Access to Parks and Green Space

In addition, many Latinos living in low-income neighborhoods have less safe parks and recreational areas where their children can play and exercise. Studies have shown that sprawling communities were likely to walk less, weigh more, and have higher rates of hypertension than residents of more compact communities.⁴⁵ Improving access to playgrounds, parks, and green spaces, especially in low-income neighborhoods, could help reduce obesity rates among children. In addition to limiting time to children's indoor activities such as watching television and playing video games.

School Nutrition and Physical Education

In order to reduce obesity rates among children, state legislators can identify school nutritional programs and physical education activities. Schools can play a critical role in reducing childhood obesity by promoting better nutrition, access to physical activity, and educational health programs.

For example, the National School Lunch program is a federally assisted meal program providing low-cost or free meals to schools across the country. Approximately 31.2 million children (101,000 schools and residential child care institutions) participated in the program in 2008-2009. The data from two national surveys, the Survey of Income and Program Participation (SIPP) and the National Health and Nutrition Examination Survey (NHANES), reported that 21% of participants were Latino; 55.2% of participants included white, African-American, and Asian students. Latino children had the highest percentage of participation in school lunch programs.⁴⁶ The same report found that whites and Asians were less likely to participate in the school lunch program.

The School Breakfast program is offered in 78% of the schools that offer the lunch program (USDA, 2006). Both programs must meet federal nutrition standards and are federally subsidized.

Many advocates have argued that some schools are not meeting federal nutrition guidelines. According to a study published by the Future of Children, in collaboration with Princeton University and the

⁴³ Foreman, C.T. Remarks made as moderator of the panel "Changing the Food Environment," part of the Transatlantic Public Policy Approaches to Tackling Obesity and Diet-Related Disease conference held in Washington, D.C. on April 8, 2008. C.T. Foreman, is the Director of Consumer Federation of America.

⁴⁴ U.S. Department of Agriculture, Economic Research Service: Food CPI and Expenditures, accessed from <http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/>

⁴⁵ Trust for America's Health and the Robert Wood Johnson Foundation. "F as in Fat 2009: How Obesity Policies Are Failing America" available at (www.healthymamericans.org) March 17, 2010.

⁴⁶ U.S. Department of Agriculture (USDA). "Profiles of Participants in the National School Lunch Program" Data from two National Surveys. (August 2006, USDA Economic Research Service Report).

Brookings Institute, highlighted the role of schools in obesity prevalence. The study found that school lunches and breakfasts have had to meet the requirements set in the dietary guidelines for Americans which include limits on total and saturated fat. As of late 1990s 75% of schools did not meet the USDA's nutrition guidelines.

The report also stated that over the past 15 years, nutritional standards have improved in some schools; however, there are still gaps in making school meals healthy to reduce childhood obesity. Additionally, unhealthy food choices or competitive foods high in fats and sugars offered to students are also a deterrent for their proper nutrition in schools. These foods do not meet federal regulated meals mandates. As a result, many states like Arizona, California, New Mexico, and Texas mandated nutritional standards for competitive foods.

Some school districts have taken action by restricting competitive foods beyond federal and state regulations. For example, as of 2003, New York City schools have removed soda vending machines from school grounds, opting to sell only water, low-fat snacks, and 100% fruit juices.⁴⁷ In Los Angeles, a soda vending ban was passed; in Chicago, public schools announced a plan in 2004 to ban soft drinks, candy and high fat snacks (Story et al., 2006).

In order to make schools more proactive in reducing childhood obesity, states could encourage their local school districts to reform nutrition standards for competitive foods and provide healthier food choices for students. Other approaches could be to improve and broaden school meal menus to make them more appealing to children. Additionally, schools could lower costs schools while promoting nutritious foods for students by limiting access to competitive foods and creating partnerships with fresh produce vendors that distribute healthy foods and beverages. Other alternatives could be reducing the fat content in school lunches and breakfasts, while making fruits and vegetables more affordable in the school vending machines and cafeterias.

In recent years, studies have shown that physical education (PE) requirements diminish with student grade levels. According to one report *The Role of Schools in Obesity Prevention*, schools requiring PE activity also dropped 50% for first grade through fifth grade to 25% in grade 8th, to only 5% in grade 12th. Although high school students enrolled in PE classes and there was an increase from 49% to 56% the share



HISPANIC OBESITY: AN AMERICAN CRISIS



of students attending class daily fell from 42% to 28% (Story et al., 2006). In 2007, CDC reported that Latino adults were 50% less likely to engage in active physical activity as non-Hispanic whites. These findings contribute to the obesity prevalence among Latinos and overweight issues facing children in schools.

State PE requirements are often not enforced. A study released by the Trust for America's Health examined state PE activity policies. According to the study, only 27 states require PE in elementary, middle, and high school (usually only one half credit or one credit of PE is required for graduation.)

The lack of PE activity enforcement in some states may be the result of school budget constraints. Others have argued that as states develop or select standardized tests, content that is not subject to testing, such as physical education, are given lower priority.⁴⁸

As obesity rates increase, more states are paying close attention to the importance of PE activity and nutrition education. Although some states are encouraging rather than mandating physical activity in schools, states like Texas are requiring elementary, middle, and junior high school students to engage in 30 minutes a day or 135 minutes a week of physical education. Texas has an obesity rate of 32%

among Latino adult, the highest from the top ten states with Latino population. In to alleviate high obesity prevalence among Latinos, legislators could focus on mandating physical education for all students and establishing health education within school curriculums.

Access to Health Care

Based on our analysis, Latinos continue to have high levels of obesity-related health conditions due to the lack of preventative care and treatment. Lowering obesity rates for uninsured Latinos is even more challenging when they lack health care access. The lack of access to physicians, community health clinics, and specialized hospitals directly contributes to poor health for many Latinos. Because they lack access to health care, many Latinos suffer from disproportionate rates of preventable diseases and death, as presented in our analysis. In addition, the lack of health care, access to language interpreters and bilingual professionals pose barriers for Latinos when seeking appropriate evaluation, and treatment regarding obesity and its health-related conditions.

⁴⁷ U.S. General Accounting Office, *School Meal Programs: Competitive Foods Are Available in Many Schools; Actions Taken to Restrict Them Differ by State and Locality*, Report no. GAO-04-673 (2004).

⁴⁸ National Association for Sport and Physical Education, *Shape of the Nation: Executive Summary* (Reston, Va.: 2001).



HISPANIC OBESITY: AN AMERICAN CRISIS

INTERVENTION STRATEGIES

In response to the high levels of obesity and overweight rates within the U.S. population, a series of alternatives have emerged to intervene in cases of severe, life-threatening (and costly) obesity. These alternatives include a combination of sometimes state-supported supported dieting, exercising, physical fitness, and weight loss programs, as well as surgical procedures.

There are several types of bariatric surgery such as gastric bypass, sleeve gastrectomy and lap-band system or laparoscopic adjustable gastric banding (LAGB). These surgical procedures are known to achieve weight loss and lower co-morbidities associated with obesity.

According to the American Society of Metabolic and Bariatric Surgery, gastric bypass surgery reduces the size of the stomach — the smaller stomach is then attached to the middle of the small intestine, bypassing the small intestine, which absorbs the most calories. Hence, patients absorb fewer calories and eat less. The vertical sleeve gastrectomy is a procedure where close to 85% of the stomach is reduced, leaving a “sleeve-shaped” stomach. Lastly, the lap-band or LAGB uses a silicone band filled with saline that is wrapped around the upper part of the stomach to create a small pouch and restrict stomach capacity. This causes patients to eat less and feel full faster.⁴⁹

These surgical alternatives enable obese individuals to reduce body mass faster, which reduces risk for other obesity health-related conditions. Although not all overweight people are suitable for weight loss surgery, it is an alternative that has considerable results.

According to many physicians, surgical procedures that reduce obesity or overweight problems also reduce obesity-related health conditions. These procedures can lead to long-term cost savings to individuals and states by reducing the need for preventative care and medicine, among other things. Forty five states cover

49 Fact sheet: Metabolic & bariatric surgery. (n.d.). American Society for Metabolic & Bariatric Surgery. Available from http://www.asmb.org/Newsite07/media/factsheet1_bariatric-surgery.pdf

bariatric surgery through Medicaid plans for individuals.⁵⁰ In particular, two states (Texas and Mississippi) with high obesity rates have implemented programs to address the obesity epidemic.

According to the American Society for Metabolic and Bariatric Surgery (ASMBS), surgery patients generally experience their maximum weight loss one to two years after surgery losing 30% to 50% of their excess weight. Many of the cost savings of the surgery can be seen within the first two years after completing the procedure. In addition, life expectancy is prolonged to many patients while being in constant monitoring by their surgeons through after care weight loss treatments.

Models from Texas and Mississippi

TEXAS

Obesity prevalence in Texas has been increasing at alarming rates. It is the leading state in obesity rates among Latinos from the top ten states with the largest Latino population. Texas had an estimated 32% of obesity prevalence among adult Latinos (CDC). Obesity is also high among Texas children. As recently as 2008, there was an overweight prevalence of 16.2% among low-income pre-school children 2-4 years of age.⁵¹

Texas ranks 14th among states with the highest adult obesity rates at 27.9%.⁵² In 2007, 66% of adults in Texas were overweight or obese, and 48% of Texas high school students did not attend physical education classes.⁵³ Additionally, the costs of obesity and obesity health-related conditions are highly impacting the state. According to the Texas Comptroller's Report on obesity from 2007, annual direct costs to the state's employers averages over \$3.3 billion per year and is projected to be \$15.8 billion annually by 2025.

In efforts to prevent this crisis Texas has approved legislation that will give state employees access to bariatric surgery, a benefit that will be subsidized by the state's Employee Retirement plan at a cost-neutral or cost-positive fiscal approach. The Texas state legislature has established an interagency council on obesity to coordinate, improve, and oversee the state employee pilot program and to implement other obesity prevention measures.

The council is comprised of several commissioners from state agencies of health, education, and agriculture. It must provide recommendations on reaching population to increase health awareness and encourage employees to participate in wellness programs from employers.

The prevalence of obesity in Texas is estimated to increase from the current level of 34.0% obese to 42.4% obese in 2018 (America's Health Rankings, 2009). In light of this, Texas Senator Leticia Van De Putte, has been at the forefront of this issue by moving forward proposals and initiatives to prevent adult and childhood obesity. She has been a strong advocate and believes that “Obesity management starts with the

50 Trust for America's Health and the Robert Wood Johnson Foundation, “F as in Fat 2009: How Obesity Policies Are Failing America” available at (www.healthy-americans.org) March 17, 2010.

51 CDC's Pediatric Nutrition Surveillance System (PedNSS) Data reported from 1998-2008: Obesity Prevalence Among Low-Income, Preschool-Aged Children by states.

52 Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF).

53 CDC States Profiles, data accessed from <http://www.cdc.gov/chronicdisease/states/texas.htm#npao>

HISPANIC OBESITY: AN AMERICAN CRISIS

state legislature and state employees' wellness. Coverage for bariatric surgery is not the only answer to the obesity epidemic, however, it is a valuable tool that can be utilized to assist those who are morbidly obese and have exhausted other methods of controlling their weight such as diet and exercise”.

Texas expanded on Mississippi's pilot program, which also grants state employees access to bariatric surgery procedures. Additionally, Texas has authorized legislation to promote educational nutrition and increase physical education activities in schools.

MISSISSIPPI

According to the TFAH and the RWJF report, Mississippi has the highest rate of adult obesity in the nation, at 32.5%. It also has the highest percentage of overweight youths (ages 10-17) at 44.4%, topping the list for five consecutive years.

Mississippi is also known to be one of the nation's poorest states. According to the CDC, annual health care costs attributed to adult obesity in Mississippi are estimated at \$757 million, of which \$223 million are Medicare expenditures and \$221 million are Medicaid expenditures. A report called Preventing Obesity with Every Resource (POWER) found that national childhood obesity alone costs Medicaid more than \$3 billion annually. According to the report, approximately 8% of private employer medical claims can be attributed to employees being overweight or obese.

In addition to having the highest obesity rate in the nation, Mississippi also has the highest rate of premature death. According to the POWER report, the state is at the top of the list for most chronic disease rankings, including heart disease, hypertension, diabetes, and stroke. It also has high disability rates. As a result, these striking health effects have a significant impact on the state's economy.

Mississippi state legislators have been implementing plans and initiatives to address the obesity crisis. In fall 2009, the CDC released a report recognizing Mississippi as one of the top states regarding school health policy implementation. Some of Mississippi's school health policies include minimum requirements for health and physical education, and removing fryers from school kitchens and replacing them with combination oven steamers. The state gave local school boards the authority to develop wellness policies and regulations that address healthy food and beverage choices in schools. These efforts help address childhood obesity and the role schools play in assisting the state to carry out these initiatives.

Recently, the state legislature passed a law that will give state employees access bariatric surgery through the State and School Employees Health Insurance Plan. This model was initially designed to address the state's alarming rates of obesity and has been a model program for other states.

According to the Mississippi law, in order to be eligible for the program, employees must have a body mass index (BMI) greater than 35, with two co-morbidities such as diabetes, hypertension, sleep apnea or asthma. Additionally, employees must be enrolled in the State and School Employees' Health Insurance plan for at least one year. Program participants must provide proof of two documented weight loss attempts

(using programs such as Weight Watchers, the Atkins diet, the South Beach diet or Sugar Busters), confirmed by the patient's primary practitioner.

Mississippi state representative and chairman of the Public Health Committee, Steve Holland, is setting an example given that he underwent the bariatric surgery and is currently enrolled in a weight loss training program. Mississippi is actively seeking preventive measures to address the obesity crisis, and the concept of providing access to medical procedures (e.g., bariatric surgery) to state employees is one of many viable options to help reduce weight and increase people's life expectancy.



NHCSL LEGISLATOR RECOMMENDATIONS

On April 10, 2010, the National Hispanic Caucus of State Legislators (NHCSL) convened 75 legislators to address the Latino obesity crisis at its national summit on Hispanic obesity. The summit participants were organized into a set of working groups to identify recommendations on the following topics:

- Nutrition and Families
- Intervention Strategies, and
- Supporting Active Living

The legislators' recommendations provide a framework for implementing initiatives to reduce obesity rates.

Key recommendations from the "Nutrition and Families" working group include the following:

- Improve mothers' access to prenatal care and promote breast feeding to enhance children's health
- Increase the inclusion of fruits, grains and vegetables to develop a nutritious diet at home
- Address food deserts by making fresh foods, via local farmer markets available through creative tax credits and other support for local businesses
- Emphasize school roles in addressing obesity prevention: Highlight the importance of exercise (physical education) and good nutrition in schools
- Encourage parent engagement in educational programs at schools to help obesity prevention
- Encourage recreational activities and exercise in collaboration with community members from the non-profit sector, corporate and faith-based organizations.
- Promote neighborhood wellness competition among families
- Government agencies could seek mechanisms through human resources policies to promote healthy environments and foster worker wellness

Key recommendations from the "Intervention Strategies" working group include the following:

- Make medical interventions available for morbidly obese state employees through state insurance programs
- Communicate statistics and data regarding community outreach in our own communities
- Encourage support groups and teams
- Incorporate support for weight loss and health promotion through programs like welfare (TANF) for weight compliance parameters
- Implement physical education and exercise mandates in schools
- Offer nutrition and wellness clinics for government employees
- Design local public education campaigns to promote nutrition, healthy products, and to foster public awareness
- Create incentives for local schools, towns and private entities to achieve wellness and promote healthy living

Key recommendations from the "Supporting Active Living" working group include the following:

- Encourage active lifestyles in the workplace (e.g., onsite fitness centers and flex-time options for employees)
- Include healthier snacks in vending machines and in business meetings
- Promote green space and parks development in public planning
- Set workplace fitness goals for employees and reward them with compensation time or other incentives
- Promote educational wellness for employees
- Foster recreational and physical activities such as dancing, walking and sports clubs
- Establish family time for fitness activities, and encourage leadership to champion fitness in communities and the workplace

HISPANIC OBESITY: AN AMERICAN CRISIS



CONCLUSION

The Latino obesity crisis requires immediate attention from all stakeholders: government at the state and federal level, business leaders, and private and non-profit sectors. Effective solutions will require collaboration across political parties. At stake are the lives of millions of constituents and the financial solvency of our state and federal governments. Reducing obesity, particularly for Latinos, will significantly lower rates of chronic disease and health care costs at the state and federal level. We hope this work provides a roadmap to the development of initiatives and opportunities that will address the obesity crisis in communities across the country.

APPENDIX:

Table 1. Overweight, obesity, and healthy weight among persons 20 years of age and over, by selected characteristics: United States, 1976-1980 and 2003-2006

(Data are based on measured height and weight of a sample of the civilian non-institutionalized population)

AGE, SEX, AND HISPANIC ORIGIN ¹	OVERWEIGHT (INCLUDES OBESITY) ²		OBESITY ⁶	
	20-74 YEARS, AGE-ADJUSTED ⁴			
	1976-1980 ³	2003-2006	1976-1980 ³	2003-2006
	PERCENT OF POPULATION			
General Population (Both sexes) ⁵	47.4	66.9	15.1	34.1
Male	52.9	72.6	12.8	33.1
Female	42.0	61.2	17.1	35.2
Mexican male	61.6	77.3	15.7	30.4
Mexican female	61.7	74.4	26.6	42.6

¹Persons of Mexican origin may be of any race. Starting with 1999 data, race-specific estimates are tabulated according to the 1997 Revisions to the Standards for the Classification of Race. See Appendix II, Hispanic origin; Race.

greater than or equal to 25 kilograms/meter². See Appendix II, Body mass index.

³Data for Mexicans are for 1982-1984. See Appendix I, National Health and Nutrition Examination Survey (NHANES).

⁴Age-adjusted to the 2000 standard population using five age groups: 20-34 years, 35-44 years, 45-54 years, 55-64 years, and 65 years and over (65-74 years for estimates for 20-74 years).

Age-adjusted estimates in this table may differ from other age-adjusted estimates based on the same data and presented elsewhere if different age groups are used in the adjustment procedure. See Appendix II, Age adjustment.

⁵Includes persons of all races and Hispanic origins.

greater than or equal to 30 kilograms/meter².

NOTES:

Percents do not sum to 100 because the percentage of persons with BMI less than 18.5 kilograms/meter² is not shown and the percentage of persons with obesity is a subset of the percent with overweight.

SOURCES:

CDC/NCHS, National Health and Nutrition Examination Survey, Hispanic Health and Nutrition Examination Survey (1982-1984), and National Health Examination Survey (1960-1962). Health, United States, 2009

HISPANIC OBESITY: AN AMERICAN CRISIS

Table 2. Overweight among children and adolescents 6-19 years of age, by selected characteristics: United States, 1976-1980 and 2003-2006

(Data are based on physical examinations of a sample of the civilian non-institutionalized population)

AGE, SEX, HISPANIC ORIGIN ¹	1976-1980 ²	2003-2006
6-11 YEARS OF AGE		
PERCENT OF POPULATION		
Both sexes ³	6.5	17.0
Boys	6.6	18.0
Mexican-American	13.3	27.5
Girls	6.4	15.8
Mexican-American	9.8	19.7
12-19 YEARS OF AGE		
Both sexes ³	5.0	17.6
Boys	4.8	18.2
Mexican-American	7.7	22.1
Girls	5.3	16.8
Mexican-American	8.8	19.9

¹Persons of Mexican origin. Starting with 1999 data, race-specific data are tabulated according to 1997 Standards for Classification of Federal data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. may be of any race

²Data for Mexicans are for 1982-1984. See Appendix I, National Health and Nutrition Examination Survey (NHANES).

³Includes persons of all races and Hispanic origins.

NOTES: Overweight is defined as body mass index (BMI) at or above the sex- and age-specific 95th percentile BMI cutoff. Age is at time of examination at the mobile examination center.

SOURCES: CDC/NCHS, National Health and Nutrition Examination Survey, Hispanic Health and Nutrition Examination Survey. Health, United States, 2009.

HISPANIC OBESITY: AN AMERICAN CRISIS

Table 3. Leading causes of death and numbers of deaths, in population and Hispanic origin: United States, 2006

(Data are based on death certificates)

RANK ORDER	ALL PERSONS		HISPANIC OR LATINO	
	CAUSE OF DEATH	DEATHS	CAUSE OF DEATH	DEATHS
	All causes	2,426,264	All causes	133,004
1	Diseases of heart	631,636	Diseases of heart	28,921
2	Malignant neoplasms	559,888	Malignant neoplasms	26,633
3	Cerebrovascular diseases	137,119	Unintentional injuries	12,052
4	Chronic lower respiratory diseases	124,583	Cerebrovascular diseases	7,005
5	Unintentional injuries	121,599	Diabetes mellitus	6,287
6	Diabetes mellitus	72,449	Chronic liver disease and cirrhosis	3,592
7	Alzheimer's disease	72,432	Homicide	3,524
8	Influenza and pneumonia	56,326	Chronic lower respiratory diseases	3,310
9	Nephritis, nephritic syndrome and nephrosis	45,344	Influenza and pneumonia	2,966
10	Septicemia	34,234	Certain conditions originating in the perinatal period	2,804

NOTES: For cause of death codes based on the International Classification of Diseases, 9th Revision (ICD-9) in 1980 and ICD-10 in 2006.

Starting in 2006, the category essential (primary) hypertension and hypertensive renal disease was changed to essential hypertension and hypertensive renal disease to reflect the addition of secondary hypertension.

SOURCES: CDC/NCHS, National Vital Statistics System; Vital Statistics National Vital Statistics Reports. Vol. 57 no. 14. Hyattsville, MD: NCHS. 2009. Health, United States, 2009

Table 4. Diabetes among adults 20 years of age and over, in population and Hispanic origin: United States, 1988-1994 and 2003-2006

(Data are based on interviews and physical examinations of a sample of the civilian noninstitutionalized population)

POPULATION AND HISPANIC ORIGIN ⁵	PHYSICIAN-DIAGNOSED AND UNDIAGNOSED DIABETES ^{1,2}		PHYSICIAN-DIAGNOSED DIABETES ¹		UNDIAGNOSED DIABETES ²	
	1988-1994	2003-2006	1988-1994	2003-2006	1988-1994	2003-2006
20 YEARS AND OVER, AGE-ADJUSTED ⁴	PERCENT OF POPULATION					
All persons ⁵	8.3	10.2	5.4	7.7	2.9	2.5
Mexican	14.2	15.7	9.7	12.4	4.5	*3.3

*Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error (RSE) of 20%-30%. Data not shown have an RSE of greater than 30%.

¹Physician-diagnosed diabetes was obtained by self-report and excludes women who reported having diabetes only during pregnancy.

of at least 126 mg/dL and no reported physician diagnosis.

NHANES adjusted the 2005-2006 FBG measurement data to be compatible with earlier data. For more information, see http://www.cdc.gov/nchs/data/nhanes/nhanes_05_06glu_d.pdf.

³Persons of Mexican origin may be of any race, per Federal classification guidelines.

⁴Estimates are age-adjusted to the year 2000 standard population using three age groups: 20-39 years, 40-59 years, and 60 years and over. Age-adjusted estimates in this table may differ from other age-adjusted estimates based on the same data and presented elsewhere if different age groups are used in the adjustment procedure. ⁵Includes all other races and Hispanic origins not shown separately. See Appendix II, Age adjustment.

SOURCES: CDC/NCHS, National Health and Nutrition Examination Survey. Health, United States, 2009

HISPANIC OBESITY: AN AMERICAN CRISIS

Table 5. Hypertension and elevated blood pressure among persons 20 years of age and over, by selected characteristics: United States, 1988-1994 and 2003-2006

(Data are based on interviews and physical examinations of a sample of the civilian noninstitutionalized population)

POPULATION AND HISPANIC ORIGIN ¹	HYPERTENSION ^{2,3} (ELEVATED BLOOD PRESSURE AND/OR TAKING ANTIHYPERTENSIVE MEDICATION)		ELEVATED BLOOD PRESSURE ²	
	1988-1994	2003-2006	1988-1994	2003-2006
20 years and over, age-adjusted ⁴	PERCENT OF POPULATION			
Both sexes ⁵	25.5	31.3	18.5	17.9
Mexican male	26.9	24.8	22.2	15.3
Mexican female	25.0	28.6	20.4	19.2

¹Persons of Mexican origin may be of any race per federal classification guidelines.

²Hypertension is defined as having measured elevated blood pressure and/or taking antihypertensive medication. Elevated blood pressure is defined as having a measured systolic pressure of at least 140 mmHg or diastolic pressure of at least 90 mmHg. Those with elevated blood pressure also may be taking prescribed medicine for high blood pressure. Those taking antihypertensive medication may not have measured elevated blood pressure but are still classified as having hypertension.

³Respondents were asked, "Are you now taking prescribed medicine for your high blood pressure?"

⁴Age-adjusted to the 2000 standard population using five age groups: 20-34 years, 35-44 years, 45-54 years, 55-64 years, and 65 years and over (65-74 years for estimates for 20-74 years). Age-adjusted estimates may differ from other age-adjusted estimates based on the same data and presented elsewhere if different age groups are used in the adjustment procedure.

⁵Includes persons of all races and Hispanic origins, not just those shown separately.

NOTES: Percents are based on the average of blood pressure measurements taken. In 2003-2006, 81% of participants had three blood pressure readings.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey. Health, United States, 2009

Table 6. Estimated Adult Obesity-Attributable Percentages and Expenditures by States

(Data from the Behavioral Risk Factor Surveillance System (BRFSS) 1998-2000)

STATE	TOTAL POPULATION (%)	(MILLIONS \$)	MEDICARE POPULATION (%)	(MILLIONS \$)	MEDICAID POPULATION (%)	(MILLIONS \$)
Alabama	6.3	\$1320	7.7	\$341	9.9	\$269
Alaska	6.7	\$195	7.7	\$17	8.2	\$29
Arizona	4.0	\$752	3.9	\$154	13.5*	\$242
Arkansas	6.0	\$663	7.0	\$171	11.5	\$180
California	5.5	\$7675	6.1	\$1738	10.0	\$1713
Colorado	5.1	\$874	5.1	\$139	8.7	\$158
Connecticut	4.3	\$856	6.5	\$246	11.0	\$419
Delaware	5.1	\$207	9.8	\$57	13.8	\$66
District of Columbia	6.7	\$372	6.5	\$64	12.5	\$114
Florida	5.1	\$3987	6.1	\$1290	11.6	\$900
Georgia	6.0	\$2133	7.1	\$405	10.1	\$385
Hawaii	4.9	\$290	4.8	\$30	11.2	\$90
Idaho	5.3	\$227	5.6	\$40	12.0	\$69
Illinois	6.1	\$3439	7.8	\$805	12.3	\$1045
Indiana	6.0	\$1637	7.2	\$379	15.7	\$522
Iowa	6.0	\$783	7.5	\$165	9.4	\$198
Kansas	5.5	\$657	6.4	\$138	10.2*	\$143
Kentucky	6.2	\$1163	7.5	\$270	11.4	\$340
Louisiana	6.4	\$1373	7.4	\$402	12.9	\$525
Maine	5.6	\$357	5.7	\$66	10.7	\$137
Maryland	6.0	\$1533	7.7	\$368	12.9	\$391
Massachusetts	4.7	\$1822	5.6	\$446	7.8	\$618
Michigan	6.5	\$2931	7.8	\$748	13.2	\$882
Minnesota	5.0	\$1307	6.6	\$227	8.6	\$325
Mississippi	6.5	\$757	8.1	\$223	11.6	\$221
Missouri	6.1	\$1636	7.1	\$413	11.9	\$454
Montana	4.9	\$175	6.2	\$41	9.8	\$48
Nebraska	5.8	\$454	7.0	\$94	10.3	\$114

HISPANIC OBESITY: AN AMERICAN CRISIS

Table 6. Estimated Adult Obesity-Attributable Percentages and Expenditures by States

(Data from the Behavioral Risk Factor Surveillance System (BRFSS) 1998–2000)

STATE	TOTAL POPULATION (%)	(MILLIONS \$)	MEDICARE POPULATION (%)	(MILLIONS \$)	MEDICAID POPULATION (%)	(MILLIONS \$)
Nevada	4.8	\$337	5.0	\$74	10.1*	\$56
New Hampshire	5.0	\$302	5.4	\$46	8.6*	\$79
New Jersey	5.5	\$2342	7.1	\$591	9.8	\$630
New Mexico	4.8	\$324	4.6	\$51	8.5	\$84
New York	5.5	\$6080	6.7	\$1391	9.5	\$3539
North Carolina	6.0	\$2138	7.0	\$448	11.5	\$662
North Dakota	6.1	\$209	7.7	\$45	11.7	\$55
Oklahoma	6.0	\$854	7.0	\$227	9.9	\$163
Ohio	6.1	\$3304	7.7	\$839	10.3	\$914
Oregon	5.7	\$781	6.0	\$145	8.8	\$180
Pennsylvania	6.2	\$4138	7.4	\$1187	11.6	\$1219
Puerto Rico	7.4		8.1		10.1	
Rhode Island	5.2	\$305	6.5	\$83	7.7	\$89
South Carolina	6.2	\$1060	7.7	\$242	10.6	\$285
South Dakota	5.3	\$195	5.9	\$36	9.9	\$45
Tennessee	6.4	\$1840	7.6	\$433	10.5	\$488
Texas	6.1	\$5340	6.8	\$1209	11.8	\$1177
Utah	5.2	\$393	5.8	\$62	9.0	\$71
Vermont	5.3	\$141	6.9	\$29	8.6	\$40
Virginia	5.7	\$1641	6.7	\$320	13.1	\$374
Washington	5.4	\$1330	6.0	\$236	9.9	\$365
West Virginia	6.4	\$588	7.3	\$140	11.4	\$187
Wisconsin	5.8	\$1486	7.7	\$306	9.1	\$320
Wyoming	4.9	\$87	5.9	\$15	8.5	\$23
Total	5.7	\$75,051	6.8	\$17,701	10.6	\$21,329

SOURCES: Finkelstein, Fiebelkorn, and Wang, 2004. Notes: In addition, these state-estimated data are limited to direct medical costs, and not indirect costs (example: absenteeism and decreased productivity) attributed to obesity). The medical expenditures for Medicaid and Medicare were not reported for the Commonwealth of Puerto Rico on this table.

Table 7. Top Ten States With the Highest Number of Latinos

STATE/AREA	LATINO POPULATION IN THOUSANDS	EXPENDITURE BY STATES-ADULT OBESITY RELATED (MILLIONS)	PERCENTAGE OF OBESE LATINO ADULTS
CALIFORNIA	11,0	\$7,675	29.2%
TEXAS	6,670	\$5,340	32.1%
NEW YORK	2,868	\$6,080	27.1%
FLORIDA	2,683	\$2,342	26.0%
ILLINOIS	1,530	\$3,439	30.7%
ARIZONA	1,296	\$752	31.4%
NEW JERSEY	1,117	\$2,342	24.1%
NEW MEXICO	765	\$324	27.6%
COLORADO	736	\$874	25.1%
WASHINGTON	442	\$1,330	29.9%

SOURCES: U.S. Census 2000, Population Demographics — States with largest Latino population

CDC: Finkelstein, EA, Fiebelkorn, IC, Wang, G. State-level estimates of medical expenditures attributable to obesity. 2004

*Estimates based on Behavioral Risk Factor Surveillance System (BRFSS) data from 1998-2000

CDC: Finkelstein et al, 2004. State-Specific percentage of adults categorized as obese by Hispanic ethnicity

*Estimates based on BRFSS data from 2006-2008.

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