

## Understanding the Socio-Economic, Health Systems & Policy Threats to Latino Health: Gaining New Perspectives for the Future

Lisa Cacari Stone, Edna A. Viruell-Fuentes, and Dolores Acevedo-Garcia

*Harvard University School of Public Health*

### Abstract

The emergence of the Latino population as the largest and diverse minority group in the U.S. presents challenges and opportunities for health practitioners, leaders and policy makers. Some evidence suggests that Latinos, and immigrants in particular, exhibit better health outcomes than would be expected given their average socio-economic status. Yet, overshadowing this positive health outlook are socio-economic, health system and policy barriers which disproportionately impact Latino health and well-being. This paper briefly discusses the Latino health paradox. It identifies the socio-economic, health systems barriers and public policies that threaten any potential health advantage. Finally, it suggests policy and prevention strategies for promoting the health of the largest emerging minority group in the U.S. Latinos.

© 2007 Californian Journal of Health Promotion. All rights reserved.

*Keywords: Latino health, socio-determinants of health, epidemiological paradox, public policy*

### Introduction

The rapid growth of Latinos in the U.S. forges new understandings on the determinants of health disparities and the potential strategies to eliminate them. In the 2000 census, 35.3 million people in the U. S. and 3.8 million people in the Commonwealth of Puerto Rico identified themselves as Hispanic (i.e., Hispanic, Spanish, or Latino of all races). Hispanics constituted 12.5% of the U.S. population in the 50 states; by subpopulation, they identified as Mexican (7.3%), Puerto Rican (1.2%), Cuban (0.4%), and other Hispanic (3.6%). By 2050, it is projected that the Latino population will grow to 103 million or 24% of the population (U.S. Census Bureau, 2000). From 1990 to 2000, the rate of the Latino population more than tripled in states like North Carolina (394%), Arkansas 337%), Georgia (300%), Tennessee (278%), South Carolina (211%) and Alabama (208%) (Kochhar, Suro, & Tafoya, 2005). The growth of the Latino population was even more dramatic in 36 counties in the South, exceeding 1,000% in some counties and 500% in many others.

More striking and alarming to the nation is that overall, Latinos bear a disproportionate burden of disease, injury, death, and disability when

compared with non-Hispanic Whites, the largest racial/ethnic population in the U.S. (Centers for Disease Control and Prevention, 2004a). Additionally, The National Healthcare Disparities Report (Agency for Healthcare Research and Quality, 2005) found that while healthcare disparities for most U.S. minorities compared with Whites are narrowing, Latinos are falling further behind. In examining the 2002 and 2003 data across six categories of access to care, the report found that 59% of the disparities in access to care were widening for Latinos, while 41% were decreasing for other minority groups. For instance, Latinos were less likely than non-Latino Whites to receive treatment for diabetes, mental illness and tuberculosis, as well as dental and preventative care (Agency for Healthcare Research and Quality, 2005).

Certainly, the evidence suggests pervasive inequalities in health status and access to care for Latinos in general, but it also masks the differences across sub-groups. As the presence of Latinos continues to grow, what new perspectives can we gain on the more subtle complexities of the Latino health condition? The heterogeneity of the Latino population in the U.S. is reflected in the diversity of health

patterns observed within this population, which vary by the health indicator under consideration, Latino subgroup, generational status and, for immigrants, length of time in the U.S. (Acevedo-García, 2004; Carter-Pokras, & Zambrana, 2001; Palloni & Morenoff, 2001; Williams & Mohammed, in press). Due to data limitations, our understanding of Latino health patterns remains incomplete, yet the emerging portrait of Latino health is one that points both to advantage and disadvantage in health status (Escarce, Morales, & Rumbaut, 2006; Vega & Amaro, 1994).

For some outcomes, Latinos seem to have better health than would be expected, given their average low socio-economic standing (Escarce, Morales, & Rumbaut, 2006; Franzini, Ribble, & Keddie, 2001; Vega & Amaro, 1994). This apparent health advantage seems to be particularly evident among immigrants vis-à-vis their U.S.-born co-ethnics with regards to infant mortality (Mathews, Menacker, & MacDorman, 2003), low-birth weight (Acevedo-García, Soobader, & Berkman, 2005), and all-cause mortality (Singh & Siahpush, 2001; Sorlie et al., 1993; Wei et al., 1996). Although this epidemiological paradox is a complex phenomenon and not necessarily generalizable across Latino subgroups and health outcomes, it suggests protective effects associated with nativity. The evidence regarding the mechanisms underlying these effects (whether due to selectivity, cultural factors, social ties, neighborhood environments, discrimination and/or racialization processes), however, remains inconclusive (Abraido-Lanza et al., 1999; Jasso, Massey, Rosenzweig, & Smith, 2004; Kaplan & Marks, 1990; Palloni & Morenoff, 2001; Palloni & Arias, 2004; Rosenberg et al., 1999; Scribner, 1996; Viruell-Fuentes, 2007).

At the same time that some Latino groups may experience a health advantage with respect to certain health outcomes, they also experience health disadvantages vis-à-vis Whites for others, notably Type 2 diabetes and obesity (Flegal, Exxati, Harris, Haynes, Juarez, Knowler et al., 1991; Harris, Fegal, Cowie, Eberhardt, Goldstein, Little et al., 1998), asthma (Lara,

Akinbami, Flores, & Morgenstern, 2006), HIV (Centers for Disease Control and Prevention, 2004b), tuberculosis (Sumaya, 1991), and cervical and stomach cancer (Ramirez & Suarez, 2001). As with adults, the rising prevalence of Type 2 diabetes and obesity among Latino youth is of particular concern (Fagot-Campagna, 2000; Keenan, el Deirawi, Walsh, Gorver, Alva, Onyemere, & Lipton, 2000; National Center for Health Statistics, 2005; Popkin & Udry, 1998; Strauss & Pollack, 2001). Given that Latino youth represent a fast-growing segment of the population, the disadvantages in health that they experience have particular importance for the health trajectories of the Latino population as a whole (Escarce, Morales, & Rumbaut, 2006).

Furthermore, because the health advantages that some Latinos experience occur primarily among immigrants, the presence of patterns associated with poor health outcomes in the second generation may over time contribute to eroding the Latino health advantage. Thus, to gain a more comprehensive perspective and to adequately address the health needs of Latinos, it is necessary to examine both factors that may exert a protective effect, as well as those that may undermine the health of Latinos. While we recognize the heterogeneity and complexities of Latino health and acknowledge the significant role of individual lifestyle behaviors, our paper focuses on the structural threats (socio-economic, health systems barriers and public policies) that undermine any potential health advantages experienced by Latinos, especially recent immigrants. Looking to the future, we offer policy and prevention strategies that can help secure the health of the largest emerging minority group and maximize the health of the entire nation.

### **Threats to Latino Health**

Research on Latino health has largely focused on the so-called Latino health paradox, on the one hand, and on the lack of health insurance among Latinos, on the other. However, these lines of work have hardly intersected. We need a comprehensive examination of Latino health in the context of structural factors, including socio-economic and healthcare disparities, which may pose a threat to Latino health.

Numerous researchers have documented a variety of factors that influence racial/ethnic disparities in health, including differentials in: socio-economic status (SES), neighborhood environments, residential segregation, distrust of the health system, physician and provider biases in diagnostic and treatment in care, and resource distribution through public policies (Acevedo-García, Lochner, Osypuk, & Subramanian, 2003; Byrd & Clayton, 2003; Geiger, 2003; Kawachi, Kennedy, Lochner & Prothrow-Stith, 1997; Kawachi & Kennedy, 2001; Kingston & Smith, 1997; Krieger, 2000; LaVeist, Nickerson, & Bowie, 2000; Lynch, Smith, Kaplan & House, 2000; Marmot, 1995; Smedley, Stith & Nelsen, 2003; Syme, 2001; Whitehead, 2000; Williams & Jackson, 2005). However, most of the empirical work documenting the effects of the above factors on health has addressed health disparities between non-Hispanic Blacks and Whites. This body of work compels us to consider the structural factors that threaten the health and well-being of Latino children and families, including 1) socio-economic determinants of health; 2) health systems barriers; and 3) public policies (see [Appendix A](#)).

### **Socio-economic Determinants of Health**

Research on the socio-economic determinants of Latino health has largely focused on the Latino paradox. While the empirical evidence does suggest that for some health outcomes Latino immigrants (i.e., first-generation Latinos) exhibit paradoxical patterns, less attention is given to the socio-economic patterning of health among second- and higher-generation Latinos. Additionally, only a few studies have examined neighborhood effects on Latino health. This research gap is significant because of the evidence that Latinos are increasingly experiencing residential segregation and neighborhood disadvantage (Acevedo-Garcia & Bates, 2007).

### **Socio-economic Status**

Low socio-economic status is associated with various negative health outcomes (Berkman & Kawachi, 2000). U.S. Latinos are more likely to experience low SES than other racial/ethnic groups. In 2002, among those aged 25+ years,

27% of Hispanics/Latinos had not completed 9th grade, while only 4% of non-Hispanic Whites had such low educational attainment (U.S. Census Bureau, 2003). Among Hispanics, the Mexican-origin population is more likely to be of lower socio-economic status than other Latino sub-groups. In 2002, among those aged 25+ years, 32% of Mexicans had not completed 9th grade, compared to 15% of Puerto Ricans, 19% of Cubans, 22% of Central and South Americans, and 13% of Other Hispanics (U.S. Census Bureau, 2003).

Some studies have noted that among Latino immigrants, socio-economic gradients in health appear attenuated, while there are steep socio-economic gradients among U.S.-born Latinos. Thus, although among immigrants, some protective factors may mitigate the effect of low socio-economic status on health outcomes, socio-economic disadvantage may be an important threat to the health of U.S.-born Latinos (Acevedo-Garcia et al., 2007; Acevedo-Garcia, Soobader & Berkman, 2005; Acevedo-Garcia et al., 2007), which has great significance given the rapid growth of the second generation. During 1970-2000, the first generation (i.e., foreign-born Latinos) contributed 45% of the growth of the Latino population, while the second generation (i.e., U.S.-born Latinos of immigrant parents) contributed 25%. In contrast, in 2000-2020, the second generation will contribute 47% of the growth of the Latino population, while the first generation will contribute only 28%. The second generation will surpass the first generation in size by 2020 (Suro & Passel, 2003). Given that foreign-born Latinos appear to have a health advantage over U.S.-born Latinos, the increase in the second generation may have implications for the health status of Latinos, as well as for the socio-economic patterning of health outcomes among them.

### **Residential Segregation and Poor Neighborhood Environments**

Clear racial/ethnic disparities in health exist in the U.S. Increasingly, social epidemiologists are examining not only the individual level determinants of such disparities, but also the contextual determinants such as neighborhood

and metropolitan area level factors. There is evidence that above and beyond individual and family characteristics, neighborhood and metropolitan factors matter for health. Comparable individuals (i.e. individuals with a similar demographic and socio-economic profile) are likely to have more positive health outcomes in neighborhoods with better physical and socio-economic environments. In relation to neighborhood environment, non-Latino Blacks and Latinos are at a clear and well-documented disadvantage with respect to Whites.

The pervasiveness and detrimental effects of residential segregation among U.S. Blacks have been widely documented. Although Latinos now constitute the largest U.S. minority group, their segregation patterns are less often discussed. Analyzing trends in Latino segregation is complex as they vary depending on the dimension of segregation examined, the region of the country, and the proportion Latino in the metro area. A comprehensive Census Bureau study of segregation in the period 1980-2000 showed that Latino unevenness, isolation and clustering tended to increase, while concentration and centralization decreased (Iceland, Weinberg & Steinmetz, 2002).

Despite the lack of consistent patterns along various segregation dimensions, a significant trend is that the highest level of Latino segregation was in areas with the highest proportion of Hispanics (Iceland et al., 2002). Also, metropolitan areas with the largest increases (214+%; highest quartile) in Latino population between 1980 and 2000 generally experienced larger increases in segregation than metropolitan areas with relatively small increases in the Latino population (Iceland et al., 2002). In sum, the absolute levels of segregation for Latinos remain lower than for Blacks (Logan, J. R. & Lewis Mumford Center for Comparative Urban and Regional Research, 2002).

There was an increase in Latino isolation from 1980-2000, and isolation was higher in areas with larger proportions of Latinos. Also, Latino segregation is increasing in those areas where

Latinos represent an already large or a growing portion of the population.

Not only do Latinos increasingly live in segregated neighborhoods, but they also experience neighborhood socio-economic environments substantially worse than those experienced by Whites, and comparable to those experienced by Blacks. In 2000, the median household income of the neighborhood (census tract) where the average group member lived (i.e. exposure index) was \$51,459 for Whites, \$53,766 for Asians, \$35,306 for Blacks and \$39,038 Latinos. Although Latinos and Blacks have lower socio-economic status than Whites and Asians, differences in neighborhood socio-economic environment persist after taking income levels into account, which suggests the existence of barriers to spatial mobility for Latinos and Blacks. In 2000, among those households earning more than \$60,000/year, on average Whites lived in neighborhoods where the median income was \$60,363. The respective figures for Asians, Blacks and Latinos were \$64,129, \$44,668, and \$48,819, respectively (Logan, J. R. & Lewis Mumford Center for Comparative Urban and Regional Research, 2002).

In a recent report, we examined health and socio-economic indicators for children of the four major racial/ethnic groups in the 100 largest metropolitan areas (Acevedo-Garcia & Bates, 2007). For low birthweight, Latino children have favorable outcomes, which is related to the so-called "Latino health paradox" (Fuentes-Afflick, 1997). On the other hand, Black children are more likely to have low birthweight than children of any other racial/ethnic group. Thus, many Black children are at a disadvantaged position from the start. Ideally, the conditions they face in their families, neighborhoods and schools would ameliorate this initial health disadvantage. Latino children start with a better health picture than Black children, and comparable to that of White children. Ideally, the conditions they face later in childhood would help preserve and further this initial health advantage. However, across metropolitan areas, the actual conditions facing Black and Hispanic children work to compound the initial health

disadvantage of Black children, and to undermine the initial health advantage of Latino children (Acevedo-Garcia et al., 2007).

In nearly half of the 100 largest metropolitan areas, only between 10% and 15% of White children lived in low-income neighborhoods. In contrast, there were no metro areas in which only 10-15% of Black or Hispanic children lived in low-income neighborhoods. In the majority of metro areas, the share of Latino children in low-income neighborhoods ranged from 30% to 70%, while in the majority of metros the share of Black children in low-income neighborhoods ranged from 45% to 80% (Acevedo-Garcia et al., 2007).

Black and Latino children are more likely to live in poor families than White children. However, this disparity in family income does not fully explain why Black and Latino children are so much more likely to live in low-income neighborhoods than their White counterparts. When we focused our analysis on poor children, we observed that in 57% of the 100 largest metropolitan areas, between 30% and 45% of poor White children lived in low-income neighborhoods. In only 4% of metro areas do the majority of poor White children live in low-income neighborhoods. In contrast, in virtually all metro areas, the majority of poor Black children lived in low-income neighborhoods, and in 86% of the areas, the majority of poor Latino children lived in low-income neighborhoods. This means that in the majority of metropolitan areas, the majority of poor Black and poor Latino children are at a double disadvantage, for example, belonging to a family in poverty and living in a low-income neighborhood (Acevedo-Garcia et al., 2007).

Thus, Hispanics/Latinos experience low individual level socio-economic status, as well as segregation in socio-economically disadvantaged neighborhoods. Both of these factors may undermine Latino health. Although Latino immigrants exhibit a health advantage in regard to some health outcomes, the growth of the second generation and the disadvantaged socio-economic profile of Latinos may result in a worsening health profile.

Given the low socio-economic status of Latinos, it is important to determine whether their experience in terms of residential patterns is of a trajectory similar to that of African Americans. However, there is a significant difference between Latinos and Blacks that needs to be taken into account when comparing their residential patterns: 40% of U.S. Latinos are immigrants (i.e. foreign born) compared to 4% of non-Latino Whites, and 6% of Blacks. The nature and dynamics of Latino segregation may be very different than those of Black segregation if second-generation Latinos (i.e., the U.S.-born children of immigrants) become more residentially integrated with Whites than the first generation. Sociologists have described this process of “spatial assimilation” as part of the process of immigrant adaptation.

In an analysis of the 2000 census, the Pew Hispanic Center showed that foreign-born Latinos and those who speak primarily Spanish are more likely to live in predominantly Latino neighborhoods (defined as those where Latinos made up less than half of the population at the time of the 2000 census) than U.S.-born Latinos and those who speak primarily English or are bilingual. While 48% of foreign-born Latinos live in majority-Latino neighborhoods, 39% of U.S.-born Latinos live in such neighborhoods. Similarly, while only 25% of English-monolingual Latinos live in majority-Latino neighborhoods, 53% of Spanish-monolingual Latinos and 45% of bilingual Latinos do (Suro & Tafoya, 2004). These patterns suggest that the spatial assimilation model may be at work since both immigrants and those not fluent in English are more likely to benefit from living in ethnic enclaves, but these benefits weaken for the second generation.

However, during periods of rapid immigration, spatial assimilation may occur at a much slower pace than immigrant settlement. Therefore, immigrant segregation may rise (Massey, 2001). During 1910-2000, immigrant segregation increased, primarily due to changes in urban structure—for example, the tendency for ethnic enclaves to form as suburbanizing non-immigrant households left older neighborhoods (Cutler, Glaeser & Vigdor, 2004).

### **Immigration Needs to be Taken Into Account When Evaluating Latino Residential Patterns**

The available evidence indicates that, to some extent, Latino segregation may be related to immigrant adaptation. However, it does not follow that for Latino immigrants, residential segregation is beneficial per se. As sociologists have shown, residential segregation may foster or limit opportunities for immigrants depending on the extent of class diversification in ethnic enclaves, resources available to immigrant communities (e.g., public schools), and discrimination (Fernandez Kelly & Schaffler, 1996; Portes, 1996; Menjivar, 2000).

To the extent that patterns of segregation persist among second-generation Latinos and neighborhood disadvantage dissipates the benefits of ethnic enclaves for Latino immigrants, the increasing residential segregation of Latinos and the exposure to detrimental neighborhood environments may undermine Latino health.

### **Health Systems Barriers**

The generally low socio-economic position of Latinos and the associated threats to health that this position entails, coupled with the barriers to accessing and receiving quality care have placed Latinos in double jeopardy for compromised health status. Indeed, Latinos are disproportionately represented among the uninsured, less likely to have a regular source of care and are more likely to face language and cultural barriers. Additionally, Latinos are less likely to comprehend critical health information for prevention and disease-management as compared to non-Latino Whites, and are under-represented in the health professions workforce and educational pipeline. Citizenship status, length of stay in the U.S., and Limited-English Proficiency (LEP) compound these systems barriers which have adverse affects on Latino health.

### **Health Insurance Coverage**

Latinos are disproportionately represented among the 45.8 million of Americans who are uninsured (USDHHS, 2005). Overall, Latinos make up about 16% of the non-elderly population, but about 30% of the uninsured (The

Henry J. Kaiser Family Foundation, 2006). What explains this?

Research has consistently documented that lower educational levels (as noted above), type of employment and income are key determinants of the high rates of non-insurance among Latinos (Andersen, Lewis, Giachello, Aday & Chiu, 1981; Andersen, Giachello & Aday, 1986; GAO, 1992; Guendelman & Wagner, 2000; Rhoades & Chu, 2000; Schur & Albers, 1996; Schur & Feldman, 2001; Vistnes & Monheit, 1997). For example, Latinos who earn less than \$30,000 annually are over four times as likely to lack health insurance as those who earn more than \$50,00 annually (Pew Hispanic Center & The Henry J. Kaiser Family Foundation, 2004). Despite a high participation in the labor force, Latinos are less likely to get employer sponsored coverage (Brown, Wyn & Teleki, 2001; Brown, Ojeda, Wyn, & Levan., 2000; Perry, Kannel & Castillo, 2000; Pew Hispanic Center & The Henry J. Kaiser Family Foundation, 2004; Quinn, 2000). Risks of being uninsured are also higher for Latinos because they are more likely to work in low-wage jobs, in small firms, and in labor, service, or trade occupations that do not offer health benefits (Perry et al., 2000; Quinn, 2000).

Coverage rates vary among Latino subgroups; this variance can be partially explained by the risks associated with low-wage employment. Among adults under 65 years, 38% of Mexicans and 42% of Central and South American were uninsured compared to 21% of Cubans and 21% Puerto Ricans. Mexicans were the least likely to have job-based coverage (44% compared to 46% Central/South Americans, 45% Puerto Ricans and 65% Cubans). Puerto Ricans were more likely to be enrolled in Medicaid (34%), partly reflecting their eligibility as native-born citizens (Brown et al., 2000).

Differences in insurance coverage are also explained by country of origin, citizenship status and language. Research shows that the lack of insurance coverage is greater among foreign-born compared with U.S.-born Latinos, Spanish compared with English-speakers, recent arrivals compared to earlier immigrants, and non-

citizens compared to citizens (Brown, Wyn, Yu, Valenzuela & Dong, 1999; Carrasquillo, Carrasquillo, & Shea, 2000; Ku & Waidman, 2003; Tienda & Mitchell, 2006; Weinick, Jacobs, Cacari Stone, Ortega & Burstin, 2004). Foreign-born Latinos (42%) are more likely to report being uninsured than Latinos born in the U.S. (25%). Of those surveyed, Latinos who predominately speak Spanish (47%) are more likely to report being uninsured than those who are English-dominant (26%) (Pew Hispanic Center & Henry J. Kaiser Family Foundation, 2002).

Where Latino communities reside geographically influence patterns of insurance coverage. Some of the reasons for this variation are differences in state labor markets, availability of employers who offer insurance coverage, eligibility for public insurance, charity care and the viability of the local safety-net. For example, in examining variation in health insurance coverage across 85 U.S. metropolitan areas, 12 metropolitan statistical areas with the highest uninsured rates are located in states with high concentrations of Latino populations and immigrants: Arizona, California, Florida, New Jersey, New York, and Texas (Brown et al., 2000). High geographic concentrations of Latinos who are uninsured are also found in the four Border States (Arizona, California, New Mexico and Texas) where 22% of the total U.S. Latino population resides. In fact, among the uninsured in the Border States, 61.8% of Latinos lacked healthcare coverage compared to 28.2% of White non-Latinos and 10% of other ethnic groups (Mendoza, Ruiz & Escarzaga, 2002).

The most pressing threat to the future of Latino health is the high uninsured rates among Latino children. In 2004, 21.1% of Latino children in the U.S. did not have any health insurance, compared to 7.6% for non-Latino White children, 13% for African-American children, and 9.4% for Asian-American children (USDHHS, 2005). Nationally, 22% of children of immigrants are uninsured, more than twice the rate of children of the U.S.-born. They are also more than three times as likely as the children of the U.S.-born to lack a usual source of healthcare, and more than twice as likely to

be in fair or poor health (Capps, 2001). Non-citizen children were also significantly less likely to have Medicaid or job-based insurance and exhibited heightened risk of being uninsured or of having no usual source of care, compared to children whose parents were citizens (Holahan, Dubay, & Kenney, 2003; Ku & Matani, 2000).

Lack of health insurance has been shown to have a significant negative impact on individuals' health and financial well-being (The Henry Kaiser Family Foundation, 2003). The long-term consequences of being uninsured and lacking access to healthcare include diminished health and well-being for Latino families and their children, and especially for recent newcomers, undermining the immigrant health advantage. While insurance coverage remains one of the most important ways to obtain access to services (Committee on the Consequences of Uninsurance, 2001), other factors undermine access and quality of healthcare, including lack of Latino leaders and providers in the U.S. healthcare system, lack of cultural and language competencies among existing providers, and the challenges associated with health literacy.

### **Cultural and Linguistic Access**

Language and culture play a pivotal role for Latinos (native-born and immigrants) in the trajectory they take to the front doors of the healthcare system as well as the quality of service and care delivered to them within the system. For instance, language access has a significant impact on health outcomes since the quality of the medical encounter influences comprehension of critical health messages, as well as adherence to health-promotion and disease prevention interventions (Carrillo, Trevino, Betancourt & Coustasse, 2001). Studies which examine the relationship between language and healthcare find that Spanish-speakers are less likely than English-speaking Latinos to have a usual source of healthcare (Kirkman-Liff, 1991; Schur et al., 1996; Weinick & Krauss, 2000). Additionally, language, citizenship status and lack of health insurance coverage place greater barriers to accessing care for Latino children. An analysis based on the 1999 National Survey of Americas

Families (Ku & Waidman, 2003) found that Latino children who are citizens but whose parents are English-speaking non-citizens are more likely to be uninsured than White children in citizen families (28% vs. 17%). Latino children who are themselves non-citizens and who are in Spanish-speaking families are over four times as likely as children in White citizen families to lack coverage (72% vs. 17%).

Research also demonstrates that Latinos who are Spanish-dominant speakers are more likely to report difficulties communicating with providers and getting healthcare. For example, 49% Spanish-dominant speakers as compared to 16% bilingual and 8% English-dominant individuals reported difficulty communicating with doctors or other healthcare providers because of language (Pew Hispanic Center & Henry J. Kaiser Family Foundation, 2002). Twenty-six percent of Spanish-dominant speakers reported having difficulty getting care because of their race or ethnic background compared to 16% of Latinos who are bilingual and 8% who are English-dominant. In addition, Latino Spanish-speakers are significantly more dissatisfied with provider communication than Latino and non-Latino Whites English-speakers (Morales, Cunningham, Brown, Liu & Hays, 1999). For major public hospitals and health systems across the country, providing healthcare in a culturally and linguistically competent manner is critical to the quality of care, patient satisfaction, successful staff training and recruitment, and the financial viability of healthcare organizations (Smedley et al., 2003).

Finally, cultural competency counts in the healthcare system because every Latino subgroup embodies a “culture” that constitutes a sense of shared beliefs, norms, and values. As previously noted, there is a protective health effect associated with nativity which is partially explained by positive cultural factors that embrace a holistic approach to health and well-being and at times may clash with the culture of Western medicine which emphasizes the concept of disease and the treatment of illness. This dissonance may also be due to the fact that a “one-size fits all” model to healthcare delivery is fostered by the historical under-representation of

Latinos in health professional schools, the absence of cultural and linguistic competency curriculum in health professional training, and the lack of compliance with the Title VI Prohibition against National Origin Discrimination as it Affects Persons with Limited English Proficiency (USDHHS, 2000). The Title VI law requires government funded programs or services to ensure meaningful access to health and social services to persons with Limited English Proficiency (LEP). Consequently, many Latinos, especially immigrants, continue to face language and cultural barriers due to a lack of providers who speak their native language and a lack of adequate interpreter services (Carrasquillo, Orav, T.A. & Burstin, 1999; Schmidt, Hart & Schur, 1995; Woloshin, Bickell, Schwartz, Gany & Welch, 1995).

### **Health Literacy**

Emerging research demonstrates that limited health literacy is associated with worse health status (Weiss, Hart, McGee & D'Estelle, 1992), higher utilization of services (Baker, Gamararian, Williams, Scott, Parker, Green, Ren & Peel, 2002), and worse clinical outcomes (Kalichman & Rompa, 2000; Schillinger, Grumbach, Piette, Wang, Osmond, Daher, Palacios, Sullivan & Bindman, 2002). Literacy level affects the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Ratzan & Parker, 2000). Indeed, as Rudd, Moeykens, and Colton (1999) state, “Patients’ literacy directly affects their access to crucial information about their rights and their healthcare, whether it involves following instructions for care, taking medicine, comprehending disease-related information, or learning about disease prevention and health promotion.” Thus, enabling Latinos and their families to understand and act in their own interest through health literacy efforts is a critical pathway to quality healthcare.

An extensive literature review (Rudd et al., 1999) confirms that individual factors (lower levels of reading, writing, math, and oral abilities to function and perform tasks) were

related to poorer psychosocial health (Weiss et al., 1992); history of heart disease (TenHave, Van Horn, Kumanyika, Matthews & Adams-Campbell, 1997); delayed diagnosis and screening (Baker et al., 2002); poorer disease-management skills (Williams, Baker, Parker & Nurss, 1998); and non-medication compliance issues (Dowe, Lawrence, Carlson & Keyserling, 1997). Evidence also suggests an association between health literacy and increased hospitalization rates (Baker et al., 2002) and healthcare costs (Committee on Health Literacy, 2004). However, this research has been focused solely on the literacy levels of English-speaking patients.

For those with limited English proficiency, issues of health literacy are compounded by issues of basic communication (Nielsen-Bohlman, Panzer & Kindig (2004). Spanish-speaking Latinos were less likely than English-speaking Latinos and non-Latinos to identify symptoms of heart attack and stroke (Dubard, Garrett & Gizlice, 2006). Another study (Zun, Sadoun & Downey, 2006) found a discrepancy between measured level of English competency and perceived English competency of the patients as judged by physicians and nurses in a hospital emergency department. This study demonstrates that there is significant lack of English-language ability of self-declared Latino patients, suggesting that providers underestimate the need for language interpreters. Certainly, the evidence suggests a link between individual literacy skills and health outcomes, but much more is needed in evaluating the health system factors undermining the communication between providers and Latino patients.

### **Health Professional Training and Education**

The under-representation of Latinos in the health professions and the educational pipeline of the health professions affect the availability and quality of healthcare services for Latino communities. In 2002, only 3.3% of practicing physicians were Latino compared to 51% of those who were White. African Americans represented only 2.2% and American Indian/Alaskan Natives 0.05% of practicing physicians (The Sullivan Commission, 2004). The proportion of nurses from underrepresented

groups is far from reflecting the composition of the total population. Data show that in 2000 Latino registered nurses comprised 2.0% of all registered nurses compared to 86.6% White (non-Latino) nurses, and 4.9% African-American and 0.5% American Indian/Alaskan Natives (The Sullivan Commission, 2004). Like medicine and nursing, the proportion of minority dentists is not reflective of the proportion of minorities in the overall population.

The educational system remains the greatest barrier to achieving diversity in the healthcare workforce (The Sullivan Commission, 2004). The causes of these shortages derive from the exclusion of people of color from health professional schools and the educational system. Historically, African Americans/Blacks, Native Americans, and Latinos were banned from most of the nation's health professions schools. For example, Black healthcare professionals, including nurses, physicians and dentists, primarily received their education from all-Black schools (Byrd et al., 2003). While affirmative action has improved the number of minority health professionals practicing today (nurses, dentists, physicians, pharmacists, psychologists, and many others), these numbers still do not reflect a fourth of our nations population who are racial and ethnic minorities. Lower Latino educational attainment vis-à-vis non-Latino Whites, the historical exclusion of Latinos from professional schools, the lack of institutional commitment, and the minimal inclusion of Latinos as critical leaders, administrators and tenured-track faculty are contributing factors to the low enrollment and retention of Latinos in schools of medicine, dentistry, nursing and other health professions (Office of the Surgeon General, 1993; The Sullivan Commission, 2004; Trevino, 1994).

Evidence from the Unequal Treatment (Smedley et al., 2003) and Sullivan Commission (The Sullivan Commission, 2004) reports demonstrate that the shortage of underrepresented minority providers is the causal link between unequal treatment and unequal health status. For instance, cultural and linguistic concordance between patients and providers is shown to improve communication

(Collins, Hughes, Doty, Ives, Edwards & Tenney, 2002), adherence to treatment (Cooper-Patrick, 2002), higher levels of patient satisfaction (LaVeist & Carroll, 2002; Saha, Komaromy, Koepsell & Bindman, 1999) and improved likelihood of preventive screening (Ponce, Gatchell, Liu, Dimas & Quan, 2005). Studies also demonstrate that minority practitioners are significantly more likely than their White counterparts to serve in minority and medically underserved communities (Cantor, Miles, Baker & Barker, 1996; Komaromy, Drake, Vranizan, Lurie, Keane & Bindman, 1996; Porterfield, 2003; Stintson & Thurston, 2002). Both the shortage of supply and lack of culturally and linguistically competent providers are barriers to healthcare.

### **Public Policies**

Public policies play a critical role in the distribution of national, state and local resources, which can create incentives and disincentives for Latinos to access the U.S. healthcare system. Given that the Latino health advantage occurs primarily among foreign-born Latinos, public policies that bar recent arrivals from preventative services threaten the health of immigrants and their subsequent generations.

One example is the enactment of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (welfare reform). For the first time in U.S. history, citizenship was a factor in determining eligibility for federally funded Medicaid and the State Children's Health Insurance Program (SCHIP), which was established in 1997. Before the welfare reform, lawful permanent residents (LPR's) were eligible for Medicaid on the same basis as citizens if they met financial and other eligibility requirements. Following welfare reform, most legal immigrants entering the U.S. after August 1996 were barred from receiving federally funded Medicaid for the first five years after immigration. While states were given the option to use state funds to provide coverage to some immigrants ineligible for Medicaid and SCHIP, only 22 states had elected this option as of 2004 (The Henry J. Kaiser Family Foundation, 2006). As of 2002, states were also given the option to use SCHIP funds to provide prenatal care to

pregnant women, regardless of their immigration status. Currently, only seven states provide SCHIP-funded prenatal care to pregnant immigrant women. Meanwhile, emergency treatment is available to all immigrants regardless of their status under Emergency Medicaid and the Emergency Medical Treatment and Labor Act (EMTALA).

These restrictions to publicly funded healthcare disproportionately impact the health and well-being of children, pregnant women, and their families (Schlosberg, 2002). As a result of the restrictions imposed on legal immigrants and non-citizens regarding their eligibility for the State Children's Health Insurance Program (SCHIP) and Medicaid, more citizen children of mixed status families (those parents who are native or naturalized U. S. citizens and those with at least one immigrant parent who is not a U.S. citizen) have been left without health coverage (Brown et al., 1999; Fix & Zimmerman, 1999; Granados, Puvvula, Berman & Dowling, 2001; Guendelman, Halpin Schauflier & Pearl, 2001).

Also, under the 1996 welfare reform changes, pregnant women who have been in the U.S. for less than five years are barred from receiving Medicaid coverage for prenatal care but not for emergency birth and delivery. Withholding public coverage for prenatal care forces women to wait to seek healthcare until it is an emergent delivery. Research demonstrates that the implementation of welfare reform at the state level has affected decreased and inadequate use of prenatal care among Latina subgroups. It has not only stimulated fear and intimidation of seeking prenatal care, but also confusion among immigrant women and their providers about eligibility requirements (Park, Sarnoff, Bender & Korenbrot, 2000). Another study found that eliminating prenatal care for undocumented immigrants would increase the morbidity and costs related to undetected sexually transmitted diseases, which are screened for during prenatal care (Fuentes-Afflick, Hessol, Bauer, O'Sullivan, Gomez-Lobo, Holman, Wilson & Minkoff, 2006; Kuiper, Richwald, Rotblatt & Asch, 1999). Clearly, this provision represents a threat to the positive birth outcomes among

Latino immigrant women compared to White women.

Finally, the fear and stigma associated with the PRWORA has had a “chilling” effect on immigrants who are eligible for benefits but do not seek them (Fix & Zimmerman, 1999). As a result, many eligible immigrants have been discouraged from using health and other benefits because of fears that their participation in public programs could cause them to be determined a “public charge” by the Immigration and Naturalization Service (INS), which then leads to a delay or denial of changes in immigration status. “Public charge” is a term used by the INS to identify an immigrant who has or is likely to become primarily dependent on the government for subsistence as demonstrated either by receipt of public cash assistance for income maintenance, by or institutionalization for long-term care at government expense (Schlosberg, 2002). These fears remain despite Department of Justice clarifications that have reiterated that Medicaid and SCHIP coverage not be used in public charge determinations. This is significant because fear of seeking healthcare benefits by immigrant parents for U.S. citizen children has implications for the health and well-being of those families and children.

A decade after welfare reform, federal, state and local governments continue to introduce measures to restrict or prohibit immigrants from receiving publicly funded healthcare. For example, during the 2005 state legislative session, approximately 80 bills seeking to restrict immigrants’ access to services or requiring benefit agencies to report applicants to federal immigration authorities were introduced in more than 20 states (National Immigration Law Center, 2005). While most of these bills failed to gain significant political support, several sponsors in several states are threatening to reintroduce them. Among them are the states that have experienced the highest growth rates of Latinos and influx of new Latino immigrants.

It is important to be aware of the on-going threats of anti-immigrant provisions at the federal level. For example, the new citizenship requirements of the Deficits Reduction Act of

2005 will restrict access to healthcare services by citizen children in families with immigrant parents. Under the law, states cannot receive federal Medicaid money unless they verify citizenship by checking documents like passports and birth certificates for people who receive or apply for Medicaid. Those naturalized citizens unable to produce the required documentation will lose Medicaid coverage (National Immigration Law Center, 2006; The Henry J. Kaiser Family Foundation, 2006).

Underlying most proposed and enacted legislation is the assumption that generous health and social benefits are magnets for increased immigration to the U.S. While provisions that ration healthcare based on citizenship status is demonstrated to decrease enrollment in Medicaid and increase barriers to accessing healthcare by immigrants (legal and undocumented), these measures have had no effect on curbing immigration. As suggested in the previous sections, Latino immigrants come to the U.S. mostly for work and not for healthcare services. Contrary to this myth, research demonstrates that per capita total healthcare expenditures of immigrants were 55% lower than those of U.S.-born persons (\$1,139 vs. \$2,546). Similarly, expenditures for uninsured and publicly insured immigrants were approximately half those of their U.S.-born counterparts, and immigrant children had 74% lower per capita health expenditures than U.S.-born children (Mohanty, Woolhandler, Himmelstein, Pati, Carrasquillo & Bor, 2005).

Rather than investing in more preventative care, the federal policy response has been to increase funding for emergency medical services provided under Medicaid. Under Section 1011 of the Medicare Prescription Drug, Modernization and Improvement Act of 2003, the federal government is allocating \$250 million to hospitals and other healthcare providers for emergency care given to uninsured immigrants (Centers for Medicare & Medicaid Services, 2003). With rising uncompensated care costs, hospitals welcome government reimbursement for emergency medical services to immigrants who lack private or public health insurance. However, interpretations of what

constitutes an emergency have generated administrative and legal problems that have complicated reimbursement to states and hospitals and diminished the willingness of institutions to provide care to immigrants (Cacari Stone, 2004). Reimbursements to hospitals also remain controversial since hospitals do not routinely collect information on their patients' immigration status.

### **Gaining New Perspectives for the Future**

As the research has indicated, structural threats (socio-economic, health systems barriers and public policies) undermine any potential health advantages experienced by Latinos, especially recent immigrants. No other U.S. racial/ethnic group faces so many threats to health status as do Latinos. Although African Americans also experience many of the same risk factors (i.e. low socio-economic status, segregation and poor neighborhoods, and discrimination in the healthcare system), they are considerably more likely than Latinos to have health insurance, less likely to experience language-related difficulties in navigating the healthcare system, and less likely to be denied health and social benefits because of immigrant status.

Moreover, while increased research on Latino health disparities has raised public awareness, the national response has been on individual interventions that address behavioral risks factors. Despite the extensive research demonstrating the social determinants of negative health outcomes (Byrd et al., 2003; Geiger, 2003; Kawachi et al., 1997; Kawachi et al, 2001; Kingston et al, 1997; Krieger, 2000; LaVeist et al, 2000; Lynch et al, 2000; Marmot et al, 1995; Smedley et al., 2003; Syme, 2001; Whitehead et al, 2000; Williams et al., 2005), social factors rarely appear to have been the object of interventions aimed at reducing inequity (Navarro, 2007; Northington-Gamble & Stone, 2006). While we recognize the significance of individual level behaviors and life-style choices in promoting health and well-being, we cannot ignore the socio-economic, health systems and policy factors threatening the health of over thirty-five million Latinos and compromising the health of the total population.

Designing effective solutions to this emerging health crisis requires understanding the heterogeneity of Latino communities and the social conditions which impact their health. Because the socio-economic and health systems factors that threaten Latino health are multi-dimensional, eliminating them requires a comprehensive approach. Looking to the future, we offer the following policy and prevention strategies to secure the health of the largest emerging minority group and maximize the health of the entire nation. The recommendations stem from this analysis on the threats to Latino health and incorporate previous health disparities elimination strategies (Aguirre-Molina, Falcon & Molina, 2001; Applied Research Center & Northwest Federation of Community Organizations, 2005; Betancourt, Carrillo, Green & Maina, 2004; Flores, Abreu, Olivar & Kastner, 1998; McDonough, Gibbs, Scott-Harris, Kronebusch, Navarro & Taylor, 2004; National Hispanic Medical Association & The Congressional Hispanic Caucus, 2002; Office of the Surgeon General, 1993; Smedley et al., 2003; Zambrana & Logie, 2000).

### **Education, Housing and Economic Viability**

A focus on a broad range of public policies is central to effectively addressing racial disparities in health (Williams et al., 2005). Social policies and programs that focus on the economic development and education of Latinos is the cornerstone to promoting and protecting intergenerational health and well-being. Since education is a vehicle for securing employment and attaining economic security, programs that prepare children early in life for school success and continue to support academic engagement are critical for future health (Mechanic, 2005). Public and private sector investments are necessary for revitalizing low-income neighborhoods, improving the quality of schools and linking Latino families to economic opportunities (Joint Center for Political and Economic Studies and PolicyLink, 2004). As a society we must also invest in improving housing conditions and neighborhood environments where Latinos reside, and provide incentives for mobility to communities of their choice. The protection of rights to equally

participate in the labor market through monitoring and compliance of federal Equal Employment Opportunity laws, the guarantee of minimum living wages and provision of employer sponsored health insurance are the basis for self-determination and health for Latino communities.

### **Health Systems Change**

Resources and mechanisms must be developed for enlarging the pool of Latino health professionals to provide culturally competent care, particularly in underserved areas. Federal funding must be restored and enhanced for programs targeted to increase Latino representation in the health professions. Title VII and VIII programs address the shortages and geographic mal-distribution of providers by training them to deliver care in underserved areas, including rural and urban communities where Latinos reside. Programs need common reporting requirements to improve data collection and strengthen evaluations in order to demonstrate where and how an increased supply has translated into more access to care in rural and underserved areas. Evaluation and monitoring is needed in order to justify future funding in Congress.

Universal access to healthcare for all persons residing in the U.S. is imperative for eliminating health disparities. At the state level the window of opportunity exists for revisiting the role of health insurance coverage in alleviating health system barriers and diminishing health disparities. Currently, states have the opportunity to address serious threats to the health of their Latino residents by assuring that the financing models and program initiatives dedicated to health coverage reform include evidence and accurate data specific to the coverage and access of Latino communities such as: take-up patterns via employer-sponsored coverage; innovative coverage for low-income adults; state administrative obstacles to enrollment and retention; and incentives to promote innovative coverage initiatives that are culturally, linguistically and financially appropriate for various Latino subgroups.

The road to improving health access and quality for Latinos is paved with a well-trained workforce that is linguistically and culturally competent. The Office of Minority Health, U.S. Department of Health and Human Services issued the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Healthcare (U.S. Department of Health and Human Services, 2001). Health professional schools could require that their faculty and students receive cultural competency training, and states could mandate this training as part of the requirement for health provider licensure. Federal and state legislation could mandate minimal service standards for the delivery of healthcare following these guidelines. States can also develop guidelines for the use of on-site interpreters. It is imperative to restore federal funding which has been dismantled over the last six years for the monitoring and compliance to ensure meaningful access to health and human services for people with limited English skills under Title VI regulations (Perez, 2003). Assuring the protection of health for Latino populations involves an active commitment to civil rights compliance, enforcement and monitoring.

Shifting the focus of the healthcare system from the treatment of diseases and emergency medical services to health promotion and prevention is the key to fostering Latino health and avoiding more expensive emergency medical services and costs due to delayed screening and treatment. Upstream prevention efforts that are proven to be more cost-effective are needed such as health literacy and health education efforts adapted for Latino populations. Early screening and disease-management skills for chronic conditions such as diabetes are greatly needed to prevent suffering and even death.

### **Policies**

The federal government through legislation enacted by Congress could strike the provision to the Temporary Assistance to Needy Families of the welfare reform law that prohibits state and local governments from spending their own money on undocumented immigrants unless an emergency and could reinstate federal benefits for legal immigrant children and pregnant

women. Political support for this Congressional action is needed in order to guarantee a federal funding match for Medicaid to states and localities for the provision of health services to the most vulnerable populations impacted by the current law. Also under the welfare reform, states have the option to create their own eligibility rules through formal state legislative enactment regarding eligibility for immigrants for state and county funded services. Eligibility for immigrant children and pregnant women could be expanded to cover essential preventative services. Further investigation is needed on intergovernmental approaches to financing and providing primary healthcare to immigrants, especially between counties and states. A more comprehensive healthcare financing plan, which is long-term and involves many levels of government and the private sector, is the only promise to securing the health of immigrant families (Cacari Stone, 2004). Finally, local leaders, governments, and advocacy groups play a significant role in shaping policy and diffusing anti-immigrant sentiment and attitudes by encouraging public debate and efforts to address the health of all Latino-Americans (native-born and more recent immigrants).

### **Data Collection and Research**

Funding is needed to strengthen data capacity at the state and federal level for tracking and monitoring inequalities in health by Latino subgroups. The Institute of Medicine (Smedley et al., 2003) recommends that data collection and monitoring should include the following:

### **References**

- Abraido-Lanza, A. F., Dohrenwend, B. P., Ng-Mak, D. S., & Turner, J. B. (1999). The Latino morality paradox: A test of the "salmon bias" and healthy migrant hypotheses. *American Journal of Public Health*, 89, 1543-1548.
- Acevedo-García, D. (2004). Some thoughts on the empirical evidence, explanations, future research designs, and implications of Latino health paradoxes. Paper prepared for the Conference on Latino Health Paradoxes, Harvard School of Public Health, Boston, MA.
- Acevedo-Garcia, D., & Bates, L. (2007). Latino health paradoxes empirical evidence, explanations, future research, and implications. *Latino/as in the U.S.: Changing the Face of America*. H. S. a. M. Rodriguez, C. New York: Springer.
- Acevedo-Garcia, D., Lochner, K. A., Osypuk, T. L. & Subramanian, S. (2003). Future directions in residential segregation and health research: a multilevel approach. *American Journal of Public Health* 93(2), 215-221.
- Acevedo-Garcia, D., Soobader, M. J. & Berkman, L. F. (2005). The differential effect of foreign-born status on low-birthweight by race/ethnicity and education. *Pediatrics*, 115, e20-e30.

collection and reporting of data on healthcare access and utilization by patient's race, ethnicity, socio-economic status, and where possible primary language; include measures of racial and ethnic disparities in performance measurement (including contracts with managed care corporations); monitor progress toward elimination of health disparities; and report racial and ethnic data by Office of Management and Budget categories, but use subpopulation groups where possible.

We concur with previous recommendations (Office of the Surgeon General, 1993; Zambrana et al., 2000) that research is needed to develop theoretically-driven conceptual frameworks to better understand the complexities of Latino health outcomes. Also, disparities in health conditions and healthcare access could be alleviated with further investigations on the effectiveness of health prevention, promotion and treatment interventions with Latino subgroups.

### **Leadership and Citizen Participation**

Finally, fostering Latino leadership in shaping health policy at the federal, state and local level is needed. This can be achieved by energizing and engaging Latino constituents to take action and claiming political power in the healthcare system. Latino participation in decision making is imperative at all levels of government and the private sector. The health and social status of Latinos is more likely to be elevated if there is increased visibility, voice and real power in critical health policy circles.

- Acevedo-Garcia, D., Soobader, M. J. & Berkman, L. F. (2007). Low birthweight among U.S. Hispanic/Latino subgroups: The effect of maternal foreign-born status and education. *Social Science & Medicine* 65(12), 2503-16.
- Agency for Healthcare Research and Quality (2005). National healthcare disparities report. Rockville, MD, U.S. Department of Health and Human Services.
- Aguirre-Molina, M., Falcon, A. & Molina, C. W. (2001). Latino health policy: A look to the future. Health issues in the Latino community. San Francisco, Jossey-Bass.
- Andersen, R., Lewis, S. Z., Giachello, A. L., Aday, L. A., & Chiu, G. (1981). Access to medical care among the Hispanic population of the southwestern U.S.. *Journal of Health & Social Behavior* 22(1), 78-89.
- Andersen, R. M., Giachello, A. L. & Aday, L. A. (1986). Access of Hispanics to healthcare and cuts in services: a state-of-the-art overview. *Public Health Reports*, 101(3), 238-252.
- Applied Research Center & Northwest Federation of Community Organizations (2005). Closing the gap: Solutions to race-based health disparities. Retrieved May 1, 2007, from <http://www.nccjstl.org/aboutthissite/undefined/closingthegap.htm>
- Baker, D. W., Gamararian, J. A., Williams, M., Scott, T., Parker, R., Green, D., Ren, J. & Peel, J. (2002). Functional health literacy and the risk of hospital admission among Medicare managed care enrollees. *American Journal of Public Health*, 2(8), 1278-1283.
- Berkman, L. F., & Kawachi, I. (2000). *Social epidemiology*. New York: Oxford University Press.
- Betancourt, J. R., Carrillo, J. E., Green, A. R., & Maina, A. (2004). Barriers to health promotion and disease prevention in the Latino population. *Clinical Cornerstone*, 6(3), 16-29.
- Brown, E. R., Wyn, R., & Teleki, S. (2001). Disparities in health insurance and access to care for residents across U.S. cities. Los Angeles: The Commonwealth Fund & UCLA Center for Health Policy Research.
- Brown, E. R., Wyn, R., Yu, H., Valenzuela, A. & Dong, L. (1999). Access to health insurance and healthcare for children in immigrant families. In D. J. Hernandez (Ed.), *Children of immigrants: Health, adjustment, and public assistance* (pp. 122-186). Washington, DC: National Academy Press.
- Brown, R., Ojeda, V. D., Wyn, R., & Levan, R. (2000). Racial and ethnic disparities in access to health insurance and healthcare (p. 186). Los Angeles: UCLA Center for Health Policy Research and The Henry Kaiser Family Foundation.
- Byrd, W. M., & Clayton, L.A. (2003). Racial and ethnic disparities in healthcare: A background and history. In B. D. Smedley, A.Y. Stith, & A.R. Nelson (Eds.), *Unequal treatment. Confronting racial and ethnic disparities in healthcare* (pp. 455-527). Washington, DC: Institute of Medicine.
- Cacari Stone, L. (2004). Analysis of the funding and provision of healthcare to immigrants after welfare reform: Local consequences and variation in New Mexico. Ann Arbor, ProQuest Information and Learning Company.
- Cantor, J. C., Miles, E., Baker, L. C. & Barker, D. C. (1996). Physician service to the underserved: Implications for affirmative action in medical education. *Inquiry*, 33(2), 167-180.
- Capps, R. (2001). Hardship among children of immigrants: Findings from the 1999 national survey of America's families. Assessing the new federalism policy brief B-29 (pp. 1-8). Washington, DC: Urban Institute
- Carrasquillo, O., Carrasquillo, A. I., & Shea, S. (2000). Health insurance coverage of immigrants living in the U.S.: Differences by citizenship status and county of origin. *American Journal of Public Health*, 90, 917-923.
- Carrasquillo, O., Orav, E. J., Brennan, T. A., & Burstin, H. R. (1999). Impact of language barriers on patient satisfaction in an emergency department. *Journal of General Internal Medicine* 14(2), 82-87.
- Carrillo, J. E., Trevino, F. M., Betancourt, J. R., & Coustasse, A. (2001). Latino access to healthcare: The role of insurance, managed care, and institutional barriers. In M. Aguirre-Molina, C. W. Molina, and R. E. Zambrana, *health issues in the Latino community* (pp. 55-73). San Francisco, Jossey-Bass.
- Carter-Pokras, O., & Zambrana, R. (2001). Latino health status. In M. Aguirre-Molina, C. W. Molina, & R. E. Zambrana (Eds.), *Hispanic issues in the Latino community* (pp. 23-54). San Francisco: Jossey-Bass.
- Centers for Disease Control and Prevention. (2004a). Health disparities experiences by Hispanics-U.S.. *American Medical Association*, 292, 2330-2331.
- Centers for Disease Control and Prevention. (2004b). HIV/AIDS among Hispanics in the U.S. 2004. Atlanta: Author.
- Centers for Medicare & Medicaid Services (2003). CMS' implementation of section 1011 of the Medicare Modernization Act: Federal funding of emergency health services furnished to undocumented aliens. Baltimore, MD: Author.

- Collins, K. S., Hughes, D. L., Doty, M. M., Ives, B. L., Edwards, J. N. & Tenney, K. (2002). *Diverse communities, common concerns: Assessing healthcare quality for minority Americans*. New York: The Commonwealth Fund.
- Committee on Health Literacy. (2004). *Health literacy: A prescription to end confusion*. Washington, DC, National Academies Press.
- Committee on the Consequences of Uninsurance. (2001). *Coverage matters: Insurance and healthcare*. Washington, DC: National Academies Press.
- Cooper-Patrick, L. (2002). Patient-provider communication: The effect of race and ethnicity on process and outcomes of healthcare. In B. Smedley, A. Stith, and A. Nelsen (Eds.), *Unequal treatment: Confronting racial and ethnic disparities in healthcare*. Washington, DC: National Academies Press.
- Cutler, D. M., Glaeser, E. L., and Vigdor, J. L. (2004). Is the melting pot still hot? Explaining the resurgence of immigrant segregation (p. 50). Washington, DC: U.S. Census Bureau, Center for Economic Studies. Retrieved May 26, 2007, from [http://www.ces.census.gov/index.php/ces/1.00/cespapers?detail\\_key=101697](http://www.ces.census.gov/index.php/ces/1.00/cespapers?detail_key=101697)
- Dowe, M. C., Lawrence, P. A., Carlson, J., & Keyserling, T. C. (1997). Patients' use of health-teaching materials at three readability levels. *Applied Nursing Research*, 10(2), 86-93.
- Dubard, C. A., Garrett, J., & Gizlice, Z. (2006). Effect of language on heart attack and stroke awareness among U.S. Hispanics. *American Journal of Preventative Medicine*, 30(3), 189-196.
- Escarce, J. J., Morales, L. S., & Rumbaut, R. G. (2006). The health status and health behaviors of Hispanics. In National Research Council, *Hispanics and the Future of America* (pp. 362-409). Committee on Population, M. Tienda & F. Mitchell (Eds.). Washington, DC: The National Academies Press.
- Fagot-Campagna, A. (2000). Emergence of type 2 diabetes mellitus in children: Epidemiological evidence. *Journal of Pediatric Endocrinology and Metabolism*, 13(Suppl. 6), 1395-1402.
- Fernandez Kelly, M. P., & Schauffler, R. (1996). Divided fates: Immigrant children and the new assimilation. In A. Portes (Ed.), *The new second generation* (pp. 30-53). New York: Russell Sage Foundation.
- Fix, M., & Zimmerman, W. (1999). *All under one roof: Mixed-status families in an era of reform* (pp. 1-20). Washington, DC: The Urban Institute.
- Flegal, K. M., Ezzati, T. M., Harris, M. I., Haynes, S. G., Juarez, R. Z., Knowler, W. C. et al. (1991). Prevalence of diabetes in Mexican Americans, Cubans, and Puerto Ricans from the Hispanic Health and Nutrition Examination Survey, 1982-1984. *Diabetes Care*, 14, 628-638.
- Flores, G., Abreu, M., Olivar, M. A., & Kastner, B. (1998). Access barriers to healthcare for Latino children. *Archives of Pediatric Adolescent Medicine*, 152, 1119-1125.
- Franzini, L., Ribble, J. C., & Keddie, A. M. (2001). Understanding the Hispanic paradox. *Ethnicity & Disease*, 11, 496-518.
- Fuentes-Afflick, E., Hessol, N. A., Bauer, T., O'Sullivan, M. J., Gomez-Lobo, V., Holman, S., Wilson, T. E., & Minkoff, H. (2006). Use of prenatal care by Hispanic women after welfare reform. *Obstetrics and Gynecology*, 107(1), 151-160.
- Fuentes-Afflick, E., & Lurie, P. (1997). Low birth weight and Latino ethnicity: Examining the epidemiologic paradox. *Archives of Pediatrics & Adolescent Medicine*, 151, 665-674.
- Government Accounting Office. (1992). *Hispanic access to healthcare: Significant gaps exist*. Washington, DC: U.S. General Accounting Office Report.
- Geiger, H. J. (2003). Racial and ethnic disparities in treatment: A review of the evidence and consideration of causes. In B. Smedley, A. Stith, and A. Nelsen (Eds.), *Unequal treatment: Confronting racial and ethnic disparities in healthcare* (pp. 417-454). Washington, DC: National Academies Press.
- Granados, G., Puvvula, J., Berman, N., & Dowling, P. T. (2001). Healthcare for Latino children: impact of child and parental birthplace on insurance status and access to health services. *American Journal of Public Health*, 91(11), 1806-1807.
- Guendelman, S., Halpin Schauffler, H., & Pearl, M. (2001). Unfriendly shores: How immigrant children fare in the U.S. health system. *Health Affairs*, 20, 1-10.
- Guendelman, S., & Wagner, T. H. (2000). Health services utilization among Latinos and White non-Latinos: Results from a national survey. *Journal of Healthcare for the Poor and Underserved*, 11, 179-194.
- Harris, M. I., Flegal, K. M., Cowie, C. C., Eberhardt, M. S., Goldstein, D. E., Little, R. R., Wiedmeyer, H. M., & Byrd-Holt, D. D. (1998). Prevalence of diabetes, impaired fasting glucose, and impaired glucose tolerance in U.S. adults. The Third National Health and Nutrition Examination Survey, 1988-1994. *Diabetes Care*, 21, 518-524.

- Holahan, J., Dubay, L., and Kenney, G.M. (2003). Which children are still uninsured and why? *The Future of Children* 13, 55-73.
- Iceland, J., Weinberg, D. H., & Steinmetz, E. (2002). Racial and ethnic residential segregation in the U.S.: 1980-2000. U. G. P. Office. Washington, DC: U.S. Census Bureau, Census Special Report, CENSR-3.
- Jasso, G., Massey, D. S., Rosenzweig, M. R., & Smith, J. P. (2004). Immigrant health: Selectivity and acculturation. In National Research Council, *Critical Perspectives on racial and ethnic differences in health in late life* (pp. 227-266). Committee on Population, N. B. Anderson, R. A. Bulatao, & R. Cohen (Eds.). Washington, DC: The National Academies Press.
- Joint Center for Political and Economic Studies and PolicyLink. (2004). *Community-based strategies for improving Latino health*. Oakland, CA: Author.
- Kalichman, S. C., & Rompa, D. (2000). Functional health literacy is associated with health status and health-related knowledge in people living with HIV-AIDS. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*, 25, 337-344.
- Kaplan, M. S., & Marks, G. (1990). Adverse effects of acculturation: Psychological distress among Mexican American young adults. *Social Science and Medicine*, 31, 1313-1319.
- Kawachi, I., Kennedy, B. P., Lochner, K., & Prothrow-Stith, D. (1997). Social capital, income inequality, and mortality. *American Journal of Public Health*, 87, 1491-1498.
- Kawachi, I., and Kennedy, B. P. (2001). How income inequality affects health: Evidence from research in the U.S.. In J. A. Auerbach and B. K. Krimgold, *Income, socio-economic status, and health: Exploring relationships* (pp. 16-28). Washington, DC: National Policy Association & Academy for Health Services Research and Health Policy.
- Keenan, H., el Deirawi, K., Walsh, M., Grover, V.V., Alva, E., Onyemere, K., & Lipton, R. (2000). Are trends in diabetes incidence changing for minority children? *Annals of Epidemiology*, 10(7), 459.
- Kingston, R. & Smith, J. P. (1997). Socio-economic status and racial and ethnic differences in functional status associated with chronic diseases. *American Journal of Public Health*, 87, 805-810.
- Kirkman-Liff, B., Mondragon, D. (1991). Language of interview: Relevance for research of southwest Hispanics. *American Journal of Public Health*, 81, 1399-404.
- Kochhar, R., Suro, R., & Tafoya, S. (2005). *The new Latino south: The context and consequences of rapid population growth*. Washington, DC: Pew Hispanic Center.
- Komaromy, M., Grumbach, K., Drake, M., Vranizan, K., Lurie, N., Keane, D. & Bindman, A. B. (1996). The role of Black and Hispanic physicians in providing healthcare for underserved populations. *New England Journal of Medicine*, 334, 1305-1310.
- Krieger, N. (2000). Discrimination and health. In L. Berkman and I. Kawachi (Eds.), *Social Epidemiology* (pp. 36-75). Oxford, UK: Oxford University Press.
- Ku, L., and Waidman, T. (2003). How race/ethnicity, immigration status and language affect health insurance coverage, access to care and quality of care among the low-income population, pp. 1-24. Washington, DC, Center on Budget and Policy Priorities for the Kaiser Commission on Medicaid and the Uninsured.
- Ku, L., & Matani, S. (2000). Immigrants' access to healthcare and insurance on the cusp of welfare reform. *Assessing the New Federalism Discussion Paper (00-03)*. Washington, DC: The Urban Institute.
- Kuiper, H., Richwald, G. A., Rotblatt, H. & Asch, S. (1999). The communicable disease impact of eliminating publicly funded prenatal care for undocumented immigrants. *Maternal and Child Health Journal*, 3, 39-52.
- Lara, M., Akinbami, L., Flores, G., & Morgenstern, H. (2006). Heterogeneity of childhood asthma among Hispanic children: Puerto Rican children bear a disproportionate burden. *Pediatrics*, 117, 43-53.
- LaVeist, T., Nickerson, K. J., & Bowie, J. (2000). Attitudes about racism, medical mistrust and satisfaction with care among African American and White cardiac patients. *Medical Care Research and Review*, 57, 146-161.
- LaVeist, T. A., Carroll, T. (2002). Race of physician and satisfaction with care among African American patients. *Journal of the National Medical Association*, 94, 937-943.
- Logan, J. R., and Lewis Mumford Center for Comparative Urban and Regional Research. (2002). *Separate and unequal: The neighborhood gap for Blacks and Hispanics in metropolitan America*. Albany, NY: Lewis Mumford Center for Comparative Urban and Regional Research.
- Lynch, J. W., Smith, G. D., Kaplan, G. A., & House, J. S. (2000). Income inequality and mortality: Importance to health of individual income, psychosocial environment, or material conditions. *British Medical Journal*, 320, 1200-1204.

- Marmot, M., Bobak, M., & Davey Smith, G. (1995). Explanations for social inequalities in health. In B. Amich, S. Levine, A. Tarlov, & D. Chapman Walsh, *Society and health* (pp. 172-210). New York: Oxford University Press.
- Massey, D. S. (2001). Residential segregation and neighborhood conditions in U.S. metropolitan areas. In N. J. Smelser, W. J. Wilson, F. Mitchell, and National Research Council (Eds.), *America becoming: Racial trends and their consequences* (pp. 391-434). Washington, DC: National Academy Press.
- Mathews, T. J., Menacker, F., & MacDorman, M.F. (2003). Infant mortality statistics from the 2001 period linked birth/infant death data set. *National Vital Statistics Report*, 52(2), 1-28.
- McDonough, J. E., Gibbs, B., Scott-Harris, J. L., Kronebusch, K., Navarro, A. & Taylor, K. (2004). *A state policy agenda to eliminate racial and ethnic health disparities*. New York: Commonwealth Fund.
- Mechanic, D. (2005). Policy challenges in addressing racial disparities and improving population health. *Health Affairs*, 24(2), 335-338
- Mendoza, G., Ruiz, A. & Escarzaga, E. F. (2002). *U.S.-Mexico border: Diagnosis of health services, Volume II*. Washington, DC: Pan American Health Organization.
- Mohanty, S. A., Woolhandler, S., Himmelstein, D. U., Pati, S., Carrasquillo, O. & Bor, D. H. (2005). Healthcare expenditures of immigrants in the U.S.: A nationally representative analysis. *American Journal of Public Health*, 95, 1431-1438.
- Morales, L., Cunningham, W. E., Brown, J. A., Liu, H. & Hays, R. D. (1999). Are Latinos less satisfied with communication by healthcare providers? *Journal of General Internal Medicine*, 14, 409-417.
- Menjivar, C. (2000). *Fragmented ties: Salvadoran immigrant networks in America*. Berkeley, CA: University of California Press.
- National Center for Health Statistics [NCHS]. (2005). *Health U.S., 2005, with Chartbook on trends in the health of Americans*. (Department of Health and Human Services, DHS Publication No. 2005-1232). Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
- National Hispanic Medical Association & Congressional Hispanic Caucus. (2002). *National Hispanic leadership summit*. San Antonio, TX: University of Texas, San Antonio.
- National Immigration Law Center. (2005). *Most state proposals to restrict benefits for immigrants failed in 2005*. Washington, DC: Author.
- National Immigration Law Center (2006). *Access to Medicaid for newborns of immigrant mothers*. Washington, DC: Author.
- Navarro, V. (2007). What is a national health policy? *International Journal of Health Services*, 37(1), 1-14.
- Nielsen-Bohlman, L., Panzer, A.M., & Kindig, D.A. (2004). *Health literacy: A prescription to end confusion*. Washington, DC: Institute of Medicine, National Academy Press
- Northington Gamble, V., & Stone, D. (2006). U.S. policy on health inequities: The interplay of politics and research. *Journal of Health Politics, Policy and Law*, 31, 93-126.
- Office of the Surgeon General. (1993). *One voice, one vision: Recommendations to the Surgeon General to improve Hispanic/Latino health*. Washington, DC: Author. Retrieved May 26, 2007, from [http://profiles.nlm.nih.gov/NN/B/C/R/Z/\\_/nnbcrz.pdf](http://profiles.nlm.nih.gov/NN/B/C/R/Z/_/nnbcrz.pdf)
- Palloni, A., & Arias, A. (2004). Paradox lost: Explaining the Hispanic adult mortality advantage. *Demography*, 41(3), 385-415.
- Palloni, A., & Morenoff, J. D. (2001). Interpreting the paradoxical in the Hispanic paradox: Demographic and the epidemiologic approaches. *Annals of the New York Academy of Sciences*, 959, 140-174.
- Park, L. S. H., Sarnoff, R., Bender, C., & Korenbrot, C. (2000). Impact of recent welfare and immigration reforms on use of Medicaid for prenatal care by immigrants in California. *Journal of Immigrant Health*, 2 (1), 5-22.
- Perez, T. (2003). The civil rights dimension of racial and ethnic disparities in health status. In B. Smedley, A. Stith, and A. Nelsen (Eds.), *Unequal treatment: Confronting racial and ethnic disparities in healthcare*. Washington, DC: National Academies Press.
- Perry, M., Kannel, S., & Castillo, E. (2000). *Task force on the future of health insurance* (pp. 1-32). New York: The Commonwealth Fund
- Pew Hispanic Center & Henry J. Kaiser Family Foundation. (2002). *National survey of Latinos*. Washington, DC: Author.
- Pew Hispanic Center & The Henry J. Kaiser Family Foundation. (2004). *Healthcare experiences: 2002 National survey of Latinos*. Washington, DC: Author.
- Ponce, N. A., Gatchell, M., Liu, J. T., Dimas, J., & Quan, K. (2005). *Cultural concordance between patient and primary care provider and cervical cancer screening*. Philadelphia, PA: American Public Health Association.

- Popkin, B. M., & Udry, J. R. (1998). Adolescent obesity increases significantly in second and third generation U. S. immigrants. *Journal of Nutrition*, 128, 701-706.
- Porterfield, D. S. (2003). Caring for the underserved: Current practice of alumni of the National Health Service Corps. *Journal of Healthcare for the Poor and Underserved*, 14, 256-271.
- Portes, A. (1996). *The new second generation*. New York: Russell Sage Foundation.
- Quinn, K. (2000). *Working without benefits: The health insurance crisis confronting Hispanic Americans* (pp. 1-23). New York: The Commonwealth Fund.
- Ramirez, A.G., & Suarez, L. (2001). The impact of cancer on Latino populations. In M. Aguirre-Molina, C. W. Molina, & R. E. Zambrana (Eds.), *Hispanic issues in the Latino community* (pp. 211-224). San Francisco: Jossey-Bass.
- Ratzan, S. & Parker, R. (2000) Introduction. In C. Selden, M. Zorn, S. C. Ratzan, R. M. Parker (Eds.), *National Library of Medicine current bibliographies in medicine: Health literacy*. NLM Pub. No. CBM 2000-1. Bethesda, MD: National Institutes of Health, Department of Health and Human Services.
- Rhoades, J., & Chu, M. (2000). Health insurance status of the civilian noninstitutionalized population: 1999. MEPS Research Findings, Agency for Healthcare Research and Quality.
- Rosenberg, H. M., Maurer, J. D., Sorlie, P. D., Johnson, N. J., MacDorman, M. F., Hoyert, D. L. et al. (1999). Quality of death rates by race and Hispanic origin: A summary of current research, 1999. *Vital Health Statistics, Series 2*(128). Hyattsville, MD: National Center for Health Statistics.
- Rudd, R. E., Moeykens, B. A., & Colton, T. C. (1999). Health literacy: A review of medical and public health literature. In J. Comings, B. Garners, & C. Smith (Eds.), *Health and literacy*. New York: Jossey-Bass.
- Saha, S., Komaromy, M., Koepsell, T. & Bindman, A. B. (1999). Patient-physician racial concordance and the perceived quality and use of healthcare. *Archives of Internal Medicine*, 159, 997-1004.
- Schillinger, D., Grumbach, K., Piette, J., Wang, F., Osmond, D., Daher, C., Palacios, J., Sullivan, G. & Bindman, A. B. (2002). Association of health literacy with diabetes outcomes. *Journal of the American Medical Association*, 288, 475-482.
- Schlosberg, C. (2002). *Immigrant access to health benefits* (p. 189). Boston, MA: The Access Project. Retrieved May 26, 2007, from [http://www.accessproject.org/downloads/Immigrant\\_Access.pdf](http://www.accessproject.org/downloads/Immigrant_Access.pdf)
- Schmidt, R., Hart, A., and Schur, G. (1995). *Limited English proficiency as a barrier to health & social services*. Calverton, MD: Macro International, Inc.
- Schur, C. L., & Albers, L. A. (1996). Language, sociodemographics, and healthcare use of Hispanic adults. *Journal of Healthcare for the Poor and Underserved*, 7, 140-158.
- Schur, C. L., & Feldman, J. (2001). Running in place: How job characteristics, immigrant status, and family structure keep Hispanics uninsured? (pp. 1-26). New York: The Commonwealth Fund.
- Scribner, R. (1996). Paradox as paradigm: The health outcomes of Mexican Americans. *American Journal of Public Health*, 86, 303-305.
- Singh, G. K., & Siahpush, M. (2001). All-cause and cause-specific mortality of immigrants and native born in the U. S.. *American Journal of Public Health*, 91, 392-399.
- Smedley, B., Stith, A., & Nelsen, A. (2003). *Unequal treatment: Confronting racial and ethnic disparities in healthcare*. Washington, DC: National Academy Press.
- Sorlie, P. D., Backlund, E., Johnson, N. J., & Rogot, E. (1993). Mortality by Hispanic status in the U. S.. *Journal of the American Medical Association*, 270, 2464-2468.
- Stintson, M. H., & Thurston, N. K. (2002). Racial matching among African American and Hispanic patients and physicians. *The Journal of Human Resources*, 38, 411-428.
- Strauss, R. S., & Pollack, H.A. (2001). Epidemic increase in childhood overweight, 1986-1998. *Journal of the American Medical Association*, 286(22), 2845-2848.
- Sumaya, L. V. (1991). Major infectious diseases causing excess morbidity in the Hispanic population. *Archives of Internal Medicine*, 151, 1513-1520.
- Suro, R., & Passel, J. S. (2003). *The rise of the second generation: changing patterns in Hispanic population growth*. Washington, DC: Pew Hispanic Center.
- Suro, R. & Tafoya, S.M. (2004). *Dispersal and Concentration: Patterns of Latino Residential Settlement*. Pew Hispanic Center.
- Syme, S. L. (2001). Understanding the relationship between socio-economic status and health: new research initiatives. In J. A. Auerbach and B. K. Krimgold (Eds.), *Income, socio-economic status, and health: Exploring the relationships* (pp. 12-15). Washington, DC: National Policy Association & Academy for Health Services Research and Health Policy.

- TenHave, T. R., Van Horn, B., Kumanyika, S., Matthews, Y., & Adams-Campbell, L. L. (1997). Literacy assessment in a cardiovascular nutrition education setting. *Patient Education and Counseling*, 31, 139-150.
- The Henry J. Kaiser Family Foundation. (2006). Medicaid and SCHIP eligibility for immigrants. Kaiser Commission on Medicaid and the Uninsured. Washington, DC: Author.
- The Henry J. Kaiser Family Foundation. (2006). New requirements for citizenship documentation in Medicaid. Medicaid Facts. Kaiser Commission on Medicaid and the Uninsured. Washington, DC: Author.
- The Henry J. Kaiser Family Foundation. (2006). Who are the uninsured? A consistent profile across national surveys. Washington, DC: Author.
- The Henry Kaiser Family Foundation. (2003). Immigrants' healthcare coverage and access: Key facts. Kaiser Commission on Medicaid and the Uninsured.
- The Sullivan Commission. (2004). Missing persons: Minorities in the health professions. A report of the Sullivan Commission on Diversity in the Healthcare Workforce. Washington, DC: Author.
- Tienda, M., & Mitchell, F. (2006). Multiple origins, uncertain destinies: Hispanics and the American future. Washington, DC: National Academies.
- Trevino, F. M. (1994). The representation of Hispanics in the health professions. *Journal of Allied Health* 23, 65-77.
- U. S. Census Bureau. (2000). Overview of race and Hispanic origin: Census 2000 brief. U. S. C. 2000. Washington, DC: Author.
- U. S. Census Bureau, Population Division, Ethnic and Hispanic Statistics Branch. (2003). Current population survey, March 2002. Washington, DC: Author.
- U. S. Census Bureau. (2003). Table 4.1 Household type by size, and by Hispanic origin and race of householder. 2004, U.S. Census Bureau, current population survey, annual social and economic supplement, 2004. Ethnicity and Ancestry Statistics Branch, Population Division. 2006. Retrieved May 26, 2007, from [http://www.census.gov/population/socdemo/hispanic/ASEC2004/2004CPS\\_tab4.1.html](http://www.census.gov/population/socdemo/hispanic/ASEC2004/2004CPS_tab4.1.html)
- U. S. Department of Health and Human Services, OPHS, Office of Minority Health. (2001). National standards for culturally and linguistically appropriate services in healthcare. Rockville, MD: Author.
- USDHHS, OASPE. (2005). Overview of the uninsured in the U.S.: An analysis of the 2005 Current Population Survey. Rockville, MD: ASPE Issue Brief, USDHHS, Office of the Assistant Secretary for Planning and Evaluation.
- USDHHS, Office of Civil Rights. (2000). Policy guidance: Title VI prohibition against national origin discrimination as it affects persons with Limited English Proficiency. Rockville, MD: Author.
- Vega, W. A., & Amaro, H. (1994). Latino outlook: Good health, uncertain prognosis. *Annual Review of Public Health*, 15, 39-67.
- Viruell-Fuentes, E. A. (2007). Beyond Acculturation: Immigration, Discrimination, and Health Research among Mexicans in the U.S.. *Social Science and Medicine*, 65, 1524-1535.
- Vistnes, J. P., & Monheit, A. C. (1997). Health insurance status of the civilian noninstitutionalized population: 1996. MEPS Research Findings. Rockville, MD: Agency for Healthcare Policy and Research.
- Wei, M., Valdez, R. A., Mitchell, B. D., Haffner, S. M., Stern, M. P., & Hazuda, H. (1996). Migration status, socio-economic status, and mortality rates in Mexican Americans and non-Hispanic Whites: The San Antonio heart study. *Annals of Epidemiology*, 6, 307-313.
- Weinick, R. M., Jacobs, E., Cacari Stone, L., Ortega, A., & Burstin, H. (2004). Hispanic healthcare disparities: Challenging the myth of monolithic Hispanic population. *Medical Care*, 42, 313-320.
- Weinick, R. M., & Krauss, N. A. (2000). Racial/ethnic differences in children's access to care. *American Journal of Public Health*, 90, 1771-1774.
- Weiss, B. D., Hart, G., McGee, D. L. & D'Estelle, S. (1992). Health status of illiterate adults: Relation between literacy and health status among persons with low literacy skills. *Journal of American Board of Family Practice*, 5, 257-264.
- Whitehead, M., Burstrom, B. & Diderichsen, F. (2000). Social policies and the pathways to inequalities in health: A comparative analysis of mothers in Britain and Sweden. *Social Science & Medicine*, 50, 255-270.
- Williams, D., & Jackson, P. B. (2005). Social sources of racial disparities in health. *Health Affairs*, 24, 325-334.
- Williams, D. R., & Mohammed, S. A. (in press). Poverty, migration, and health. In D. R. Harris & A. C. Lin (Eds.), *The colors of poverty: Why racial and ethnic disparities persist*.
- Williams, M. V., Baker, D. W., Parker, R. M., & Nurss, J. R. (1998). Relationship of functional health literacy to patients' knowledge of their chronic disease: A study of patients with hypertension and diabetes. *Archives of Internal Medicine*, 158(2), 166-172.
- Woloshin, S., Bickell, N. A., Schwartz, L. M., Gany, F. & Welch, H. G. (1995). Language barriers in medicine in the U.S.. *Journal of the American Medical Association*, 273, 724-728.

- Zambrana, R., & Logie, L. A. (2000). Latino child health: Need for inclusion in the U.S. National discourse. *American Journal of Public Health*, 90, 1827-1833.
- Zun, L. S., Sadoun, T., & Downey, L. (2006). English-language competency of self-declared English-speaking Hispanic patients using written tests of health literacy. *Journal of the National Medical Association*, 98, 912-917.

### **Acknowledgements**

We want to thank the Alonzo Yerby Public Health Program and the WK Kellogg Scholars in Health Disparities Research Program for their generous support of the post-doctoral fellowships for Drs. Cacari Stone and Viruell-Fuentes at the Harvard School of Public Health.

#### Author Information

Lisa Cacari Stone, PhD, MS\*  
Yerby Postdoctoral Fellow  
W. K. Kellogg Scholar in Health Disparities  
Harvard University School of Public Health  
Department of Society, Human Development, and Health  
Landmark Center 3 East, Room 437  
401 Park Drive  
Boston, MA 02115  
E-Mail: [lcacari@hsph.harvard.edu](mailto:lcacari@hsph.harvard.edu)

Dolores Acevedo-Garcia, PhD, MPA-URP  
Associate Professor  
Department of Society, Human Development, and Health  
Harvard University School of Public Health  
Building II, 3rd Floor  
655 Huntington Avenue  
Boston, MA 02115  
Ph.: 617-432-4486  
Fax.: 617-432-3123  
E-Mail: [dacevedo@hsph.harvard.edu](mailto:dacevedo@hsph.harvard.edu)

Edna Viruell-Fuentes, PhD, MPH  
Yerby Postdoctoral Fellow  
W. K. Kellogg Scholar in Health Disparities  
Harvard University School of Public Health  
Department of Society, Human Development, and Health  
Landmark Center 3 East, Room 439  
401 Park Drive  
Boston, MA 02115  
Ph.: 617-998-1070  
E-Mail: [eviruell@hsph.harvard.edu](mailto:eviruell@hsph.harvard.edu)

\* corresponding author

## Appendix A Threats to Latino Health

Level of Threat	Key Findings
<b>Socio-Economic Determinants of Health</b>	
Socio-economic Status	<ul style="list-style-type: none"> <li>▪ Low socio-economic status is associated with various negative health outcomes.</li> <li>▪ Latinos are more likely to experience low SES than other racial/ethnic groups: 27% had not completed 9<sup>th</sup> grade compared to 4% of non-Latino Whites.</li> <li>▪ Latino children experience low individual level socio-economic status.</li> </ul>
Residential Segregation and poor neighborhood environments	<ul style="list-style-type: none"> <li>▪ Individual &amp; family characteristics, neighborhood &amp; metropolitan factors matter for health.</li> <li>▪ The highest levels of Latino segregation have been found in areas with highest proportion of Latinos.</li> <li>▪ Latinos experience segregation in socio-economically disadvantaged neighborhoods. Both of these factors may undermine Latino health.</li> <li>▪ To the extent that patterns of segregation persist among second-generation Latinos and neighborhood disadvantage dissipates the benefits of ethnic enclaves for Latino immigrants, the increasing residential segregation of Latinos and the exposure to detrimental neighborhood environments may undermine Latino health.</li> </ul>
<b>Health Systems Barriers</b>	
Health Insurance Coverage	<ul style="list-style-type: none"> <li>▪ Insurance coverage is a significant factor in obtaining access to services.</li> <li>▪ Latinos make up about 16% of the non-elderly population, but about 30% of the uninsured.</li> <li>▪ Lower educational levels, type of employment and income are key determinants of the high rates of non-insurance among Latinos.</li> <li>▪ Mexicans and Central and South Americans are the least likely among Latino subgroups to have job-based coverage and the most likely to be uninsured.</li> <li>▪ Lack of insurance coverage is greater among foreign-born compared with U.S.-born Latinos, among Spanish-speakers compared with English-speakers, among recent arrivals compared to earlier immigrants, and among non-citizens compared to citizens.</li> <li>▪ Highest rates of uninsurance are geographically concentrated in Latino metropolitan areas and along the U.S.-Mexico border area, and increasing for Latinos in new growth communities.</li> <li>▪ Latino children are more likely to be uninsured than Whites and among Latinos, non-citizen children are less likely to have Medicaid or job-based insurance.</li> <li>▪ Consequences of being uninsured include not having a regular source of care, delayed care, and lack of preventative care and screening.</li> </ul>

<b>Level of Threat</b>	<b>Key Findings</b>
Cultural and linguistic access	<ul style="list-style-type: none"> <li>▪ The lack of culturally and linguistically competent providers, compromises quality of care (reduction of medical errors), patient satisfaction, successful staff training and recruitment, and the financial viability of safety net institutions (reduced cost via disease management, prevention of avoidable ER use).</li> </ul>
Health literacy	<ul style="list-style-type: none"> <li>▪ Spanish-speakers are less likely to have a usual source of care, have greater difficulty communicating with and understanding their healthcare providers, and lack access to interpreters.</li> </ul>
Health professional training and education	<ul style="list-style-type: none"> <li>▪ English language ability and low literacy skills adversely impact health outcomes, increase hospitalization rates, undermine disease management strategies, and inhibit health awareness and early screening of chronic conditions.</li> <li>▪ Severe under-representation of Latinos in the health profession and educational pipeline negatively impacts the availability and quality of health services for Latino communities.</li> </ul>
<b>Public Policies</b>	
Welfare Reform	<ul style="list-style-type: none"> <li>▪ Given that the Latino health advantage occurs primarily among foreign-born Latinos, public policies that bar recent arrivals from preventative services are counterproductive.</li> <li>▪ The 1996 welfare reform made citizenship a factor in determining eligibility for Medicaid, barring most legal immigrants entering the U.S. after 1996 from receiving federally funded Medicaid for the first five years upon entry.</li> <li>▪ Restrictions to Medicaid and SCHIP have left more citizen children of mixed-status families without health coverage.</li> <li>▪ Pregnant women who have been in the U.S. for less than five-years are barred from receiving Medicaid coverage for prenatal care but not for emergency birth and delivery.</li> <li>▪ Welfare reform has stimulated fear and confusion which has discouraged immigrants from seeking health benefits they are eligible for.</li> </ul>
Other	<ul style="list-style-type: none"> <li>▪ Federal and state governments continue to introduce measures that restrictive or prohibit immigrants from receiving publicly funded healthcare.</li> <li>▪ New proof of citizenship requirements of the 2005 Deficits Reduction Act and other measures such as Section 1011 which fund emergency care, deter immigrants from obtaining more cost-effective preventative services, counteracting any protective affect of having been born outside the U.S.</li> </ul>