RUTGERS

Center for State Health Policy

A Unit of the Institute for Health, Health Care Policy and Aging Research

Building a Culture of Health with Latinos in New Jersey

Peter Guarnaccia, Ph.D.
Karen D'Alonzo, Ph.D.
Sandra E. Echeverría, Ph.D.

June 2016

“SALUD”

Xavier Cortada, 36" x 48", acrylic on canvas, 2003 (www.cortada.com)
(Used with permission of the artist.)

About the Authors

Peter Guarnaccia is Professor in the Department of Human Ecology at the School of Environmental & Biological Sciences and Investigator at the Institute for Health, Health Care Policy & Aging Research at Rutgers University. His research interests include cross-cultural patterns of psychiatric disorders, cultural competence in mental health organizations, and processes of cultural and health change among Latino immigrants. He has examined mental health among Latinos in the U.S. and in Puerto Rico for two decades, most recently using the National Latino and Asian American (NLAAS) mental health study funded by NIMH. He has been shifting his research to Mexico and currently directs one of the International Service Learning Programs on Culture & Community Health in Oaxaca, Mexico.

Karen D'Alonzo is an Associate Professor and the Associate Dean for Nursing Science at the Rutgers School of Nursing. She is also the founding Director of the School of Nursing's Center for Community Health Partnerships. Using a framework of community based participatory research (CBPR), Dr. D'Alonzo's scholarship focuses on: 1) bio-behavioral approaches to promotion of physical activity and the prevention and management of obesity among diverse groups of women and 2) the role of acculturation stress and *marianismo* beliefs as a barrier to healthy lifestyles among Hispanic immigrant women. Her NIH-funded research projects have made use of lay community health workers/*promotoras de salud* to deliver health promotion interventions in the immigrant Latino community. Dr. D'Alonzo has also initiated academic and research partnerships with the nursing programs at the State University of Oaxaca (SUNEO).

Sandra E. Echeverría is an Associate Professor and Director of the Community Health Education Program at the School of Urban Public Health at Hunter College, CUNY School of Public Health. Dr. Echeverría is a social epidemiologist whose research seeks to understand how neighborhood contexts, poverty, and immigrant status pattern physical activity, diabetes and smoking in racially/ ethnically diverse populations. She has conducted quantitative and qualitative projects in the city of Newark, NJ, where she investigated exposure to neighborhood violence and its impact on youth physical activity in a community sample, and explored community members' perceptions of the role of parks and the surrounding neighborhood for promoting health. In more recent work, she has implemented community-engaged projects to increase physical activity among Latinos diagnosed with diabetes.

Table of Contents

Acknowledgments

We would like to acknowledge funding from the New Jersey Health Initiatives program of the Robert Wood Johnson Foundation for support of the development of this White Paper on "Building a Culture of Health for Latinos in New Jersey."

We would like to acknowledge Anindita Fahad (Rutgers School of Public Health) and Jennifer Rodriguez Rutgers School of Nursing) for their excellent research assistance to this project. They showed great initiative in identifying important new research on the topics covered in this White Paper.

We would like to thank four reviewers who carefully read and provided comments on the draft version of this paper. They are Steven Levin (Medical Director, Eric B. Chandler Health Center); Mariam Merced (Director of the Health Promotions Office, Robert Wood Johnson University Hospital); Frances Munet-Vilaro (Associate Professor, Rutgers School of Nursing); and Maria Soto-Greene (Vice Dean and Director, Hispanic Center of Excellence, Rutgers New Jersey Medical School). I would also like to thank Linda Melamed, my wife, for her careful editorial comments and insightful suggestions for strengthening the paper. At the same time, the contents of this paper are the sole responsibility of the authors.

Finally, we would like to acknowledge Xavier Cortada, who generously allowed us to use his painting "Salud" that captures the themes of this White Paper so beautifully.

Building a Culture of Health with Latinos in New Jersey

Peter Guarnaccia, Ph.D., Karen D'Alonzo, Ph.D., and Sandra E. Echeverría, Ph.D.

Introduction: Culture of Health Framework

The Culture of Health is an emerging framework developed by the Robert Wood Johnson Foundation (Plough 2015) to stimulate broader thinking about the meanings of health in the community and the factors that produce good health (See Figure 1 in the Appendix, p. 30). One of the goals of promoting the Culture of Health Framework is to move our thinking about health beyond focusing only on health care systems to thinking about all the ways the social and cultural dimensions of how people live their lives affect their health (the social determinants of health). If we think about health in this expanded way, then actions to promote healthier individuals and communities must be framed much more broadly than simply gaining better access to health care, though access to care remains a critically important issue. The Culture of Health Action Plan (See Figure 2, p. 31) has the following key components: making health a shared value; fostering cross-sector collaboration to improve well-being; creating healthier, more equitable communities; and transforming health and health care systems (Plough 2015).

As we think about these dimensions of promoting health with Latino communities, it becomes clear that we need:

- To take seriously issues of Latino diversity nationally and locally
- To place different Latino groups in their historical context, especially their histories of migration and settlement
- To understand how the social and physical environments where Latinos settle in New Jersey affect their health
- To identify how Latinos' health behaviors and responses to health education interventions may differ from other ethnic/racial groups
- To assess how Latinos' access to and interactions with health care systems shape health outcomes.

In this White Paper, we address these issues and suggest ways that organizations and communities implementing the Culture of Health Framework might adapt their approaches to the diversity of Latino communities in New Jersey.

Cross-Cutting Themes in the Latino Culture of Health

Diversity in Latino Communities

When we think about Latino communities in the U.S. and New Jersey we need to be aware of issues of diversity within diversity (Guarnaccia et al. 2007). As of 2014, there were 55 million Latinos in the U.S., making up approximately 17% of the U.S. population. The Latino population in the U.S. is of diverse national origins, with people of Mexican origin making up 64% of the population; Puerto Ricans 9.5%; Cubans, Salvadorans and Dominicans between 3–4% each; and many other Central and South American groups accounting for smaller percentages (National Institute for Latino Policy 2015). These percentages are based on official U.S. Census figures and underrepresent the number of undocumented Latinos in the U.S. While these numbers reflect the total population of Latinos in the U.S., the proportions and distributions of Latinos are quite different at the state and local levels.

New Jersey's population is 18% Latino, making it the largest ethnically diverse group in the state. New Jersey's Latino population has a somewhat unique profile compared to national data, with Puerto Ricans being the largest group (434,000), followed by Mexicans (218,000), Dominicans (198,000), Colombians (102,000), Ecuadorians (100,500), Cubans (83,000), Peruvians (76,000) and Salvadorans (57,000) (Wu 2011). It was not too long ago that Cubans were the second largest Latino group, but the aging of the population and outmigration of Cubans to Miami coupled with the rapid rise of other groups make Cubans less prominent today. In truth, all of Latin America can be found in New Jersey.

Latinos are not evenly divided across the state; specific groups concentrate in certain counties and communities (See Maps 1 & 2, pp. 32–33). Puerto Ricans are most heavily concentrated in Hudson and Essex counties and still maintain a presence in the city of Vineland in South Jersey; Mexicans in Passaic and Middlesex; Dominicans in Passaic and Hudson counties; Colombians in Bergen and Union; and Cubans in Hudson County.

When we look at the NJ County Health Rankings (University of Wisconsin Population Health Institute 2015), most of the counties where Latinos are most populous are in the bottom half of the state county health rankings (See Maps 3 & 4, pp. 34–35). Exceptions are Bergen, Middlesex and Union counties. There are multiple factors that go into the County Health Rankings, including life expectancy, health status, health behaviors, clinical care, social and economic factors and the physical environment. Overall, these data tell us that Latinos live in counties where there are a number of factors that put their health, broadly defined, at risk.

The implications of Latino diversity in New Jersey are that when we think of implementing the Culture of Health at the community level, as it is being done in the New Jersey Health Initiatives 2015 programs, different communities will have very different mixes of Latinos with their own histories and cultures and they will face different levels of health challenges. There are

several reasons why this diversity is important and why these factors have important impacts on health status and access to health care.

Different Latino groups and their countries of origin have very different histories of relationships with the United States that are critical to understanding the different migration patterns and citizenship statuses of Latino groups. Puerto Rico was annexed to the U.S. in 1898 after the Spanish American War and all Puerto Ricans were made U.S. citizens in 1917 in order to fight in World War I. Puerto Ricans have been migrating to New Jersey for many decades, some coming first to New York City and then moving to New Jersey for work and better living conditions. Some came directly to South Jersey to work on farms through special labor arrangements between the governments of Puerto Rico and New Jersey and many still live in communities like Vineland. There are many multi-generational Puerto Rican families in New Jersey. In recent years, there has been a resurgence of Puerto Ricans moving to the mainland due to the economic problems on the Island.

Cubans started coming to New Jersey in large numbers after the 1960 Cuban Revolution; New Jersey was the second most frequent destination after Miami. Cubans were greatly aided to attain citizenship and translate their skills to jobs in New Jersey through special refugee programs and thus have attained higher social status than other Latino groups. Different waves of the Cuban migration have had different experiences of incorporation into the U.S.; in particular, the 1980's "Marielitos" were less welcomed because they were poorer and darker-skinned than previous Cuban migrants.

Dominicans have come to escape political strife and economic hardship on the island for many years, but they did not receive the special treatment that Cubans did. Some Dominicans have flown to Newark Airport with tourist visas and then overstayed those visas. Other Dominicans cross to Puerto Rico on precarious boats and then make their way to the U.S. mainland. Mexicans more typically cross the U.S.-Mexico border without documents and then make it to New Jersey travelling across the U.S. They come to find work and reunite with family. Central Americans also often travel through Mexico following similar paths to Mexican immigrants. South Americans have diverse patterns of migration. The journeys of those from Central and South American can be quite costly and dangerous and often involve traumatic experiences along the way. These different paths to New Jersey imply different experiences of hardship and trauma in the migration process and different contexts of reception once arriving to New Jersey communities.

Because of marked differences in educational opportunities in their home countries, different reception of immigrants in New Jersey, and different levels of authorization to be in the U.S., different Latino groups and individuals occupy different occupational sectors of the economy, have different socioeconomic statuses, and different levels of protection in their jobs. It is important to assess these factors in beginning to work with particular Latino communities in New Jersey.

Citizenship status also varies widely across groups. All Puerto Ricans are citizens, as are most Cubans; many Dominicans and South Americans become naturalized several years after they arrive to the United States. While in the Southwestern U.S, Mexicans have multiple generations who have lived in the U.S. and are citizens, in New Jersey, Mexicans and Central Americans are recently arrived and have the largest number of undocumented individuals of all Latino groups. Given the large presence of Puerto Ricans in New Jersey in multi-generation communities, the majority of Latinos in New Jersey are U.S. citizens, a fact that is often overlooked.

Many Latinos have problematic relationships with the legal system due to undocumented status and related discrimination against Latinos in New Jersey and nationally. Some of the bias in the legal system results in longer prison sentences for Latinos, causing extended family separations. In their work environments, many Latinos lack access to legal representation to defend their rights as workers. This is particularly true for undocumented Latinos, of whom there are approximately 420,000 in New Jersey (Hoefer, Rytina, and Baker 2012). The undocumented Latinos mostly work in hazardous jobs and have great difficulties filing for disability from work-related injuries. Lack of citizenship prevents Latinos from seeking help from police in domestic violence cases, reporting unsafe conditions to housing inspectors, and highlighting dangerous work conditions. All of these legal issues resonate with various health vulnerabilities that we discuss further in subsequent sections.

It is important to recognize the cultural diversity among Latino groups and how these factors affect health and health care access. All Latinos share African, Indian and Spanish origins to differing extents. Different countries have different mixes of these origin groups that affect language, religion, foodways, music, and other important cultural features. There are large populations of both Spanish-dominant individuals in New Jersey and bilingual individuals who speak English and Spanish due to multi-generational Latino families. Among Mexican immigrants in New Jersey from the large southern states of Oaxaca and Puebla, there are people from Indian communities, some of whose first languages may be an indigenous language rather than Spanish. While many Latinos are Catholic, Protestant religions have made major inroads in Latin America and among Latino communities in the U.S. Caribbeans may practice a mix of spiritual religions and Catholicism that integrates African and Spanish traditions in new ways in the forms of Espiritismo and Santeria. Diets are very different among Latino groups depending on their region of origin. Caribbean Latinos' diets are based on rice, beans, chicken and fish. Mexicans and Central Americans have diets based on various kinds of corn tortillas, beans, and meats. In South America, foodways reflect different indigenous crops, such as the potato, as well as European influences, particularly Spain and Italy, but also German and Asian influences. If we are to take seriously "culture" in the Culture of Health, all these cultural and social issues need to be taken into account in developing community initiatives to promote and improve the health of different Latino groups.

Concepts of Health

An important step in implementing the Culture of Health and making health a shared value among New Jersey Latinos is to understand what "health" means. In a series of focus groups with a diverse group of Latinos in several communities in New Jersey and New York, Martinez and Guarnaccia (2007) explored what it meant to be able to live a "good life" [*una vida buena*] and to be able to function in and contribute to society. In reviewing these findings, they highlighted what health means to Latinos. Given the diversity of Latinos in these focus groups, it was striking how similar the ideas of health were across Latino groups; Latinos appeared to share values about health among themselves, but had potentially important differences in the meanings of health compared to other ethnic/racial groups. There was a strong emphasis on being able to live a "tranquil life" [*una vida tranquila*]. To better understand this concept, participants elaborated on what they meant by a "good life."

> *Para mí una buena vida sería llevar una vida de tranquilidad, sentirse con un poco de salud, que es lo principal, y... sentirse para mi bienestar con su familia unida y vivir tranquilo.* [A good life would be living a tranquil life, being in good health, that's the most important … to feel a sense of well-being about my family's unity and to live peacefully.] (20)

In many of the focus groups, ideas about the centrality of social relationships, especially family relations, emerged as keys to health and a good life. These ideas fit with epidemiological findings about the importance of social relationships to maintaining health.

> *Para mí la buena vida sería una buena unión familiar y poder compartir con los demás cualquier necesidad que haya.* [For me a good life would be to have good family unity and to be able to share with others whatever necessity there might be.] (20)

Participants linked health to staying away from "vices," particularly not abusing alcohol or drugs.

In addition, one of the key roles of the family is to protect and nurture children; one of the major challenges for Latino immigrants is to protect and support their children in the complex and difficult transition to the United States. For some Latino immigrants, especially from Mexico and Central America, families experience long periods of separation because parents come to the U.S. first to find work and establish a home. Both the separation and subsequent reunification have resulted in multiple stressors. Families, especially those coming from rural areas in their home countries, often fear that their children will not be safe in the urban centers in the U.S. where many Latinos live.

> *Para mí la buena vida es conservar las amistades y creer en Dios, alejarnos de vicios y mantener nuestros hijos fuera de peligro.* [For me, a good life is maintaining friendships and believing in God, staying away from vices and keeping our children out of danger.] (20)

Health is also intimately tied to spirituality; to believing in and seeking God's protection in life. In thinking about implementing the Culture of Health framework among Latinos in NJ, these broad ideas about health need to be incorporated within this framework.

Latino Health Paradox & New Perspectives on Latino Health

A key concept in thinking about the Culture of Health for Latinos is the "Latino Health Paradox" (Abraído-Lanza, Chao, and Flórez 2005; Abraído-Lanza et al. 1999; Markides and Eschbach 2005; Morales et al. 2002; Taningco 2007). Simply stated, the Latino Health Paradox is the finding that immigrant Latinos have better health than U.S. born Latinos, and in many cases better health than other U.S. groups, including European Americans. The reason this is a paradox is that Latino immigrants tend to be poorer, have lower levels of education, and worse access to health care than these comparison groups; these are all factors that correlate with worse health outcomes more broadly (Morales et al. 2002). Latino immigrants have also experienced many of the stresses of the migratory process itself. So the expectation is that immigrant Latinos would have worse health than U.S.-born Latinos or other groups in the U.S. This health paradox cuts across a number of health and mental health issues as well as overall mortality. Yet, when one explores the Latino Health Paradox more fully it becomes quite complicated.

The Latino Health Paradox has been most clearly documented for Mexican immigrants, by far the largest group of immigrants in the U.S. Puerto Ricans do not experience a health paradox, in large part because their Island has already been transformed by the U.S. and they do not travel the same social and cultural distances in coming to the mainland U.S. as other Latino groups. Other Latino groups show a much more mixed picture. Health issues such as depression, substance abuse, adverse pregnancy and birth outcomes, high blood pressure, cancers and overall mortality show a particularly strong health paradox pattern among Latinos, where immigrant Latinos have surprisingly low levels of these problems compared to U.S.-born Latinos.

While the literature has been quite convincing in documenting the Latino Health Paradox, especially for Mexican immigrants, it has been less successful in explaining the source of the differences. One set of explanations revolves around health behaviors. Immigrant Latinos exhibit very low rates of smoking and substance abuse, especially among women, and higher levels of physical activity, though not leisure-time exercise (Abraído-Lanza, Chao, and Flórez 2005). Some dietary practices, around pregnancy for example (Galvez 2011), also appear to be healthier for immigrants. Family support and solidarity has also been identified as an important cultural variable that protects the health of immigrant Latinos (Unnatural Causes 2008).

Some studies have suggested that as Latinos age, they return home, taking the sicker members of the population away from the U.S. leading to undercounting of deaths (Markides and Eschbach 2005). However, this phenomenon, sometimes called the "salmon bias", has been shown to be an unlikely explanation of mortality differences, especially for groups for whom return migration is unlikely (e.g., Cubans) or groups where health statistics are collected in the

U.S. and abroad (e.g., Puerto Ricans) (Abraído-Lanza et al. 1999). Moreover, all these studies find that the longer Latinos have been in the U.S., and especially by the second generation, these health advantages disappear and Latinos' health is worse than European Americans across many important health categories.

Recent studies have raised some questions about the Latino Health Paradox, although these tend to weaken, rather than eliminate the immigration effect (Barcellos, Goldman, and Smith 2012). For example, newer studies argue that because of the low access to health care or the use of emergency departments that only focus on acute problems, many immigrant Latinos have undiagnosed or undertreated health problems that appear to make their health appear better than it is. Barcellos and colleagues (2012) used the National Health and Nutrition Examination Survey that included a large over-sample of Mexican Americans. They found that self-reported diabetes and hypertension was significantly lower among Mexicans than the levels of these health issues uncovered in these same people when they went for the clinical part of the study. Thus, access to health care, a challenge for undocumented Latino immigrants, is critical to both understanding health patterns and maintaining health.

Still other researchers suggest that the health paradoxes observed may vary when examined within broader systems of socioeconomic disadvantage and racial/ ethnic stratification in the U.S. (Echeverría et al. 2013). For example, although Latino immigrants may retain cultural practices and belief systems that may be beneficial to health, they often face language barriers in accessing care, live in impoverished neighborhoods, participate in low-wage and hazardous occupations, and have one of the worst educational outcomes of all racial/ ethnic groups in the U.S. (Kandula, Kersey, and Lurie 2004; Malmusi, Borrell, and Benach 2010). Low levels of education affect literacy in Spanish and English, and also result in low levels of health literacy. In recent work by Echeverría and colleagues (2013), the authors showed that educational attainment and nativity status increased risk for disease more than expected if these exposures acted independently, suggesting that education and birth place act synergistically and should simultaneously be considered in public health approaches.

There is also increasing evidence indicating that early life experiences influence the development of adult health outcomes and that the apparent health advantage observed among immigrant Latinos diminishes or disappears across generations due to early life stressors experienced by the first generation that "imprint" risk for subsequent generations (Fox et al. 2015). Thus, social factors are important determinants of health that need to be carefully included in research studies to avoid underestimating the increased disease risk Latinos face.

These findings highlight important implications of the Latino Health Paradox for implementing the Culture of Health among Latinos in New Jersey. As William Vega, a prominent medical sociologist at the University of Southern California has often said, entrance into the U.S. should come with a warning – "Caution: Coming to the U.S. may be dangerous to your health!" If Latinos arrive healthy and get sicker the longer they are here, then preventive interventions

with the Latino community are especially important. The Culture of Health perspective implies the need to work across varied sectors to more comprehensively address the multiple health challenges and barriers faced by Latinos, and by inference to harness existing community strengths to prevent the deterioration of health over time. Organizations and communities in New Jersey can play important roles in preventing health declines through a series of actions suggested by the Culture of Health.

KEY MESSAGES: CROSS-CUTTING THEMES IN LATINO HEALTH

- **Focus on preventive interventions to reverse the trend of health declines among Latino immigrants with longer duration in the U.S.**
- **Ensure that interventions are tailored to the unique needs of specific Latino groups and build on the cultural strengths of those groups.**
- **Strengthen support systems for newly arrived immigrants and Latino families, especially Latino children who face acculturation stressors early in life and carry risks into adulthood.**
- **Engage in collaborative, multi-sector work with community coalitions to advocate for community resources and maximize population health for Latinos.**

Dimensions of the Culture of Health Specific to Latino Communities

Social & Economic Contexts: Neighborhoods

The places where people live, work and play are recognized as important determinants of health. In general, Latinos tend to settle in areas with a high concentration of other Latinos (also known as 'ethnic enclaves') and live in neighborhoods often characterized by poverty, unemployment and crime (See Maps 1–4, pp. 32–25). One particular feature of impoverished neighborhoods is that housing stock is limited or of low quality. In the Philadelphia-New Jersey American Housing Survey, Latinos occupied 11.76% of all rentals with plumbing issues, 23.7% with mice, 29.6% units with holes in the floors, and 22.8% with exposed wiring (United States Census Bureau/American Fact Finder, 2013, Summary Table C-07-RO-M). According to Child Trends data, one in three Hispanic children lives in a neighborhood described by their parents as "never safe." Living in impoverished neighborhoods and coming from poor households places Latino children in 'double

jeopardy' by having to overcome socioeconomic barriers in their family as well as social and environmental problems in the neighborhoods in which they live (Murphey, Guzman, and Torres 2014).

Social & Economic Contexts: Housing

To overcome housing shortages and affordability issues, many Latino families live with extended family, other relatives, and non-family members to be able to also afford transportation to work, childcare, clothing, and food (Parra-Cardona et al. 2006; Suro 2003; Tienda and Mitchell 2006). Approximately 2.5% of the Latino population nationwide live in severely crowded households, which is six times more than the national average (Vargas-Ramos 2005). Further, 25% of Latino children share a bedroom with two or more family members, compared to 5% of non-Latino children (Pew Hispanic Center 2009). These national data should be examined at the local level when working with specific Latino communities in New Jersey. Problems of crowding affect the healthy development of Latino children. There are numerous health effects that result from living in crowded and poor quality housing, including infectious diseases, respiratory conditions, injuries, and food insecurity (Cutts et al. 2011).

According to housing policy standards, renter households spending more than 30% of their income on housing costs and utilities are considered cost burdened. In New Jersey, close to half of all Latinos spend 35% or more as a percentage of their household income on rent, and only 8.7% of owner-occupied households in the state belong to Latino families (United States Census Bureau, 2013, Summary Table DP04).

The highest disease burden resulting from living in dilapidated, poorly maintained housing is exposure to lead dust and asbestos in children (Carter-Pokras et al. 2007). The problem of lead exposure for Hispanic children is exacerbated by their exposure to lead in other cultural products, including folk remedies for *empacho* such as *greta* and *azarcón*, which have widely tested positive for lead content (Carter-Pokras et al. 2007; Quintero-Somaini et al. 2004). Again, lead exposure is highly localized and needs to be examined in specific Latino neighborhoods. Another housing quality issue is the effects of exposure to insects such as cockroaches that have been implicated in higher asthma rates of Latino children, especially those from Puerto Rico.

Neighborhoods & Health Behaviors

Aside from housing quality, the neighborhoods where people live can promote more active living and healthy eating or further exacerbate health issues. Overall safety of neighborhoods is a key health issue. Problems such as crime and gang violence have negative effects on residents' health.

A national report on Latino disparities in obesity found that only 33% of Latinos live within reasonable walking distance of a park compared to half of Whites, and some studies show that lack of outdoor spaces for recreation is associated with higher odds of obesity (Nyberg, Ramirez, and Gallion 2011). This has important consequences for Latino youth and the burden of obesity

present in this population. Today, Latino boys (specifically of Mexican origin) have a higher prevalence of obesity (40%) than White (30%) or African American boys (37%), while Latina girls have higher obesity prevalence (38%) than their White peers (26%) (Glickman 2012; Ogden et al. 2012; Singh, Siahpush, and Kogan 2010).

In a study by Echeverría and colleagues (2015) focused on New Jersey youth, they found that youth with foreign-born Latino parents were more likely to walk or bike to school than youth of U.S.-born Latino parents, after controlling for neighborhood level factors that are detrimental to physical activity. An implication of this finding is that effective interventions to promote physical activity are feasible to design, even in resource poor settings, if parents support more active living and local conditions are taken into account. The state of New Jersey was one of the first in the nation to adopt a Complete Streets policy to improve safe passages and roadways for bicyclists, pedestrians, transit riders, and the mobility impaired.

In 2011 only three-fourths (76.9%) of the national census tracts had access to healthy food retailers. In the American Housing Survey of Philadelphia-New Jersey, one-fifth (19.43%) of respondents had no grocery store within 15 minutes distance, while another one-fifth (21.5%) had access to a full service grocery store (United States Census Bureau/American Fact Finder, 2013, Summary Table S-03-AO-M).

Although improving the walkability of neighborhoods has clear health benefits, public transportation also remains a necessity. In the U.S., 13.7% of low income Latinos do not have access to a car for transportation; a basic necessity for accessing key resources such as food and health care. Further, Americans in the lowest income groups, such as Latinos, spend more of their monthly budget on transportation (42%) than do middle income Americans (22%) In the 2013 American Housing Survey, 89% of Latino households spent whatever income they had left after basic expenses on public transportation (United States Census Bureau/American Fact Finder, 2013, Summary Table S-04C-AO-M). Transportation inequity has consequences for socially disadvantaged populations in terms of access to healthy food, health care access, residential options and educational opportunities. Further, it is important to note that living near the urban core does not automatically translate to higher access to public transportation. In fact, urban centers often have less transportation-related investments and infrastructure like bus service or train routes, than do suburban communities. This leads Latinos to depend more on “underground” transportation systems that may be dangerous due to lack of regulation. Thus, many Latinos across New Jersey lack access to key resources to promote a Culture of Health because of limited public transportation infrastructure.

Employment

Lastly, Latinos also have a disproportionate burden of occupation-related health risks. They have a high prevalence of occupational asthma due to their work in commercial cleaning industries, manufacturing plants, painting-related businesses, and farming. Approximately 88% of farm

laborers in the U.S. are Latino and are at increased risk for adverse health outcomes such as cancers, miscarriages, birth defects, and skin diseases. The health consequences of farmwork are compounded by the fact that nationally only 33% of farmers have any type of health insurance or access to health care (Quintero-Somaini et al. 2004). A report on fatal occupational injuries by the New Jersey State Department of Health and Senior Services released in 2003 indicated that while the incidence of work-related injuries was lower than the national average, 23% were among Hispanics and 41% of these deaths were among foreign born individuals. Work related falls were the cause of 15.38% of the fatalities: half of these were among Hispanic men (New Jersey Department of Health and Senior Services 2003).

Physical Environmental

Because of economic limitations and proximity to employment, Latinos often have to make the difficult tradeoff between better job prospects and having to compromise their health by living near major highways, factories, power plants, and contaminated superfund sites. These environments contain a number of health hazards such as ground level ozone, nitrogen oxide, carbon, mercury and other hazardous chemicals known to cause respiratory problems and linked to certain forms of cancers. For example, nearly half of all U.S. Latinos live in counties that report higher than permissible ground-level ozone standards. Latinos in New Jersey are also 8 times more likely to live in counties with unhealthy levels of particulate matter pollution than Whites (New Jersey Department of Health 2015). These environmentally polluted neighborhoods lead to a higher number of emergency room visits for asthma and other respiratory disorders for Latinos. Latino children are more likely to make hospital visits due to poor asthma management than Whites because of these environmental triggers and because of lack of access to quality and continuous health care (Bell, Peng, and Dominici 2006).

KEY MESSAGES: SOCIAL & ECONOMIC ISSUES

- **Consider neighborhood-level barriers and community assets in the design of health interventions.**
- **Target households as a source of prevention, not just individuals.**
- **Address special needs of Latino youth living in impoverished households *and* impoverished neighborhoods.**
- **Work closely with city governments, developers and health institutions to create affordable recreation spaces for low income residents.**
- **Work closely with churches and schools to develop joint use agreements so residents have year round extended access to gym and recreational facilities.**

- **Create programs to address mental distress resulting from living in overcrowded housing.**
- **Address social factors that affect health, such as access to affordable, fresh fruits and vegetables through developing supermarkets and farmers markets.**
- **Implement work-based health initiatives targeting Latinos.**

Health Behaviors to Promote a Culture of Health

Obesity, Diabetes & Cardiovascular Disease: Critical Health Issues

The inter-related health issues of obesity, type 2 diabetes mellitus (T2DM) and cardiovascular disease (CVD) loom as major epidemics among Latinos. Although weight gain is common among newcomers to the US (Guendelman, Cheryan, and Monin 2011), Latino immigrants begin to gain considerable weight fairly rapidly after coming to the US. Rates of obesity and obesogenic diseases such as T2DM increase exponentially with time spent in the US (Flegal et al. 2010; Kaplan et al. 2004). Kaplan and colleagues (2004) demonstrated a strong association between obesity and length of residence in the United States. The prevalence of obesity among those with 0 to 4, 5 to 9, 10 to 14, and 15 years of residence in the United States was 9.4%, 14.5%, 21.0%, and 24.2% respectively. The data indicated that immigrants who have resided in the United States for 15 years or more experienced approximately a four-times greater risk for obesity than recent immigrants who have resided in the country for 5 years or less. While genetic factors may affect the development of T2DM among many Latinos, particularly those with indigenous ancestry (Lara-Riegos et al. 2015; SIGMA Type 2 Diabetes Consortium 2014), social factors are likely more important than genetic ones in the rapid rise of diabetes. The age of onset of the disease appears to be younger among Latino immigrants to the US than among their counterparts who did not immigrate. Mexican-American women in particular have one of the world's highest rates (44%) of metabolic syndrome (Ford, Li, and Zhao 2010), an obesity-related disorder. The contributing factors most commonly cited for this weight gain among Latino immigrants are dietary changes and decreased physical activity post immigration (Goel et al. 2004; Gordon-Larsen et al. 2003). Acculturation stress may also be a contributing factor that accelerates the onset and progression of obesity and T2DM among susceptible Latino immigrants (D'Alonzo, Johnson, and Fanfan 2012).

Nationally, it is estimated that close to one quarter of Latinos in the US are hypertensive (United States Department of Health and Human Services 2011). While the percentage of immigrant Latinos diagnosed with hypertension is significantly lower than rates among Blacks and Whites in the US, rates of hypertension among Latinos increase sharply with the number of years living in the US (Espino and Maldonado 1990; Sunquist and Winkleby 1999; Vaeth and Willett 2005). This is particularly true for those Latino subgroups with African ancestry, such as

Dominicans, Puerto Ricans and Cubans (Morales, Leng, and Escarce 2011). Poorly controlled hypertension results in an increased risk for morbidity and mortality among Latinos and needs to be examined at the community and clinic level in New Jersey. Mexican-Americans in particular continue to show lower levels of awareness and poorer control of hypertension than non-Latinos (Borrell and Crawford 2008). Reduced access to health care, language barriers, low health literacy and poor doctor-patient communication have been suggested as factors that contribute to under-diagnosis and suboptimal management of hypertension among Latinos. Similar to its contributory role in weight gain and T2DM, acculturation stress may be a more influential factor in the genesis of hypertension among Latino immigrants than differences in diet or physical activity (Steffen et al. 2006).

Health Behaviors: Substance Use & Sexual Health

As previously noted, immigrant Latinos appear to have some significant advantages in overall health status upon arrival in the US**.** Though not conclusive, the favorable health behaviors may be attributed to Latino cultural values, health practices, and dietary consumption. There is an important need to identify local patterns of health behaviors and risks as in many cases we only have national data for these patterns.

Tobacco use is generally lower among immigrant Latinos (14%) than among non-Hispanic Whites (24%), however, there are a few notable exceptions. Smoking rates are higher among Puerto Rican (26%) and Cuban males (22%). Abraído-Lanza, Chao, and Flórez (2005) have noted that acculturation is associated with an increased likelihood of smoking among immigrant women and not men. Based on national data overall, smoking rates among Latino youth are cause for concern; 22% of high school Hispanics smoke, compared with 25% of Whites, 11% of African Americans, and 11% of Asian Americans (CDC 2004).

Substance abuse prevalence for Latinos is similar to that of the general U.S. population, but appears to be increasing, particularly among second and later generation Latinos (Alegría et al. 2008). Alcohol abuse is a serious problem among some groups of immigrant Latino men. Binge drinking is sometimes used to cope with the stressors of immigration, acculturation and long work hours and may precede episodes of interpersonal violence (Alegría et al. 2008). Immigrant Latina women are less likely to abuse alcohol or drugs, perhaps because there are strong taboos against substance abuse in traditional Latin American cultures (Vega et al. 2002). Among the three Latinos subgroups most widely studied, Puerto Ricans and Mexicans have significantly higher rates of alcohol than Cubans (Rios-Bedoya and Freile-Salinas 2014), perhaps due to differences in SES and acculturation.

Sexual health issues among Latinos are impacted by a myriad of factors. Some previous concepts of sexuality associated with Latinos, such as *machismo, marianismo,* and *familismo* are now being reconsidered in relation to the myriad other factors that affect sexual health, including culture, economic and policy issues that affect Latinos. For example, birth rates for Hispanic

women, which for many years were the highest in the US, plummeted 25% between 2006 and 2013 (Martin et al. 2015). At least some of the decline has been attributed to the economic recession and unemployment, but some of this change can also be attributed to the effects of increased education and acculturation processes. Amaro and de la Torre (2002) conducted a review of studies that revealed younger age at intercourse and pregnancy, and increased risk taking behavior such as negative attitudes toward condoms and having multiple sexual partners among more acculturated Latinas. Although birth rates among adolescents have declined over the last 10 years, Latina adolescents continue to have the highest birth rate of any ethnic/racial group in the U.S. (Mathews et al. 2010).

Currently, the national sexually transmitted infection (STI) rates for Latina adolescents are approximately two times higher than White adolescents (8.93 and 4.3 per 1000, respectively). Additionally, Latina adolescents, ages 15–19 years have significantly higher STI rates when compared to Latino male adolescents of the same age group (8.93 and 1.92 per 1,000, respectively) (CDC 2005). Although Hispanic immigrants have lower rates of almost all types of cancer than do US born Hispanics and non-Hispanics, cervical cancer rates among Latinas are higher than women in other racial/ethnic groups (Siegel, Naishadham, and Jemal 2012). Much of this increase in cervical cancer rates is attributed to limited knowledge about and low acceptance of cancer screening tests and the HPV vaccine among both immigrant and US born Latinas.

In New Jersey, one in 172 Latinos is living with HIV/AIDS (Sutton, Patel, and Frazier 2014). Latinos account for 22% of living HIV/AIDS cases among women and 27% among men in New Jersey. Studies have demonstrated that not only are screenings for HIV suboptimal in all at-risk populations, but unplanned pregnancies among HIV-infected women are prevalent despite diagnosis. Among Latino women reported with HIV/AIDS, 65% had acquired HIV through heterosexual contact. Twenty percent of children reported with HIV/AIDS in New Jersey are Latinos; virtually all of these children were infected perinatally.

KEY MESSAGES: INTEGRATIVE STRATEGIES TO ENHANCE HEALTH PROMOTION BEHAVIORS

- **Identify healthy outlets for relief of stress associated with acculturation, including engaging in more physical activity and maintaining contact with family members in home country.**
- **Initiate health promotion programming among new immigrants to maintain salutogenic behaviors and prevent development of unhealthy behaviors associated with acculturation.**

- **Enhance health literacy about chronic disease management and improve access to vital medications.**
- **Design interventions which manage obesity via a focus on culturally appropriate dietary changes, physical activity and management of sources of acculturation stress.**
- **Build health promotion programs on successful models from Latin America, such as the *Ciclovia* and *Viarecreativa* programs that enhance physical activity and community building.**
- **Develop culturally appropriate methods to promote acceptance of a range of sexual health interventions among women and men in the Latino community.**

Clinical Care: Access to Health Care Services

An important resource for maintaining health is being able to access and receive quality health care. Access to health care services is a major issue for Latinos broadly; it is a particularly severe problem for undocumented immigrants. Overall, Latinos in the U.S. experience the highest rates of lack of health insurance of any racial/ethnic group. Nationally, 32% of Latinos lack health insurance compared to 11% of Whites. Latinos are also more likely to depend on public insurance rather than private insurance as compared to Whites and other racial/ethnic groups. Estimates are that approximately 80% of undocumented Latinos lack health insurance.

Data from the 2009 New Jersey Family Health Survey (Lloyd et al. 2011) show a complicated picture of health insurance coverage for immigrant families and much higher rates of lack of health insurance for Latinos. Hispanic children in NJ have the highest rate of uninsurance at 15%. For Hispanic adults the rates of lack of health insurance vary widely. Overall, 75% of Mexican adults lack insurance and that rate jumps to 91% for non-citizens. For other Latinos, the rates are much lower, but still higher than state-wide and national numbers. Forty-one percent of all Latinos in NJ lack health insurance; 26% of US-born Latinos and 30% of foreign-born citizen Latinos lack health insurance, while that percent jumps to 73% for non-citizens. These numbers are in stark contrast to White and Asian immigrant non-citizens who experience uninsurance rates of 12%. Other questions in the NJ Family Health Survey asked about likelihood to enroll in the new Affordable Care Act programs. Hispanics, non-citizens and those who spoke a language other than English were less likely to say they would enroll in health insurance (Brownlee, Cantor, and Lloyd 2013). In sum, lack of health insurance is a critical issue for access to health care for Latinos in NJ.

Lack of insurance has real consequences for health. Twenty-two percent of non-citizen children in the NJ Family Health survey reported no usual source of care (Lloyd et al. 2011). For

adults the situation was much worse; 44% of non-citizens reported no doctor visit in the past year compared to less than 30% of citizens, and 38% of non-citizens had no usual source of care compared to 13% of citizens. Specialty care access was also more limited for non-citizens. The problem of lack of insurance is compounded in mixed status families where parents are undocumented and U.S.-born children are citizens. Even when children are eligible for children's health insurance programs, their parents may not know about or be reluctant to access these programs for fears about their legal status. The lack of access to care means that non-citizens were more likely to wait longer to deal with health problems, to have worse problems when they appeared for care, and to be more likely to use Emergency Departments.

A key area of concern is lack of dental care for Latino children. Dental care, which is highly effective at preventing dental disease, is critical in a number of areas. Children with high levels of dental disease, cavities, and tooth pain are less able to eat well affecting energy and school performance, have more self-esteem problems due to appearance, and are at risk for more severe health problems if dental infections get into the blood stream, especially affecting the cardiovascular system. In New Jersey, Latino children are much less likely to have access to dental care than other groups (Nova and Gaboda 2011). Thirty-eight percent of Latinos lacked access to dental care compared to a quarter of other minorities and 14% of Whites. Children whose families lacked health insurance were very likely to receive no dental care. In the Healthier New Brunswick 2010 focus groups, school nurses reported dental problems in Mexican children as the top health problem they saw in schools (Guarnaccia et al. 2004).

Language barriers are another key access issue for Latinos in New Jersey. In spite of national guidelines requiring any program that receives federal funds to provide language services to limited English-speaking clients, these interpreter programs remain largely unfunded mandates. In New Jersey, there are a patchwork of services for Latinos who speak mostly Spanish. In some health care services, there are large numbers of bilingual staff and they have been trained as medical interpreters through rigorous training programs. Others provide professional interpreters or access to language line services. Many do not have formal interpretation services or policies about who should interpret. Some health programs rely on student volunteer programs, such as the New Brunswick Community Interpreter Program. Using well trained bilingual college students as volunteer interpreters, this program has become an important resource to provide language assistance in primary care settings. To provide consistent, high quality interpretation services in Spanish to the Latino population, there needs to be state regulations and funding to support these services. Another language issue, especially among Mexican immigrants, is the presence of indigenous immigrants who speak an indigenous language as their first language and limited Spanish as their second. While the extent of this problem is hard to document, it presents additional challenges to health care services to meet their obligations to Latino consumers.

Another key challenge is the low health literacy among Latinos. With the continued roll out of the Affordable Care Act of 2010, it is vitally important that the role of health literacy on the overall well-being of an individual and community is included in Culture of Health initiatives (Berkman et al. 2004; Neilsen-Bohlman, Panzer, and Kindig 2004; Schwartzberg, VanGeest, and Wang 2005). The ACA defines "health literacy as the degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions." In 2010, the DHHS developed the National Action Plan to Improve Health Literacy recognizing that low health literacy affects all sectors of our population. It is not surprising that health literacy contributes to the inequities experienced by the Latino community as research has found that minorities and those who come from lower SES backgrounds have even lower health literacy skills. This call to action has become even more essential given the increased use of electronic health records. There is an important imperative to engage Latino patients and the health system as a whole in providing health information in a format and language that Latino patients can understand and that responds to their health care needs.

While some safety net providers have developed sliding fee scales and other strategies to provide services to uninsured clients, paying for health remains a major challenge. Latinos, especially non-citizen immigrants, appear more open to using public clinics that provide affordable health services than other ethnic/racial groups. The Affordable Care Act provides one avenue to increasing the level of health insurance, but it is not open to undocumented immigrants. A related challenge is access to specialty care, especially for those with complex problems such as diabetes or asthma. While there are some excellent and innovative examples of use of mobile vans and other services to extend services to Latinos in NJ, to fully implement the Culture of Health means finding ways to incorporate all NJ residents in accessible and quality health care.

Another key issue is training and recruiting more bilingual/bicultural health professionals. Programs need to start in the early grades and certainly by high school (for example, the New Brunswick Health & Sciences High School) to motivate and prepare students to enter health professions training. Specific training and supervision to prepare health and mental health professionals to work with Latino populations is a high priority. Finally developing resources to recruit and retain bilingual/bicultural health professionals is critical to providing culturally competent health services to the rapidly growing Latino community.

KEY MESSAGES: ACCESS TO HEALTH CARE SERVICES

- **Ensure access to high quality health services and health education programs that are culturally competent for all Latinos.**

- **Develop innovative, bold insurance programs to increase access to quality health care for all Latinos given the higher rates of uninsurance among Latinos compared to other ethnic/racial groups.**
- **Strengthen safety net programs and increase access to high quality primary health services, specialty care and prevention initiatives for immigrant Latinos, regardless of immigration status.**
- **Increase use of dental care among Latino children.**
- **Remove language and health literacy barriers in accessing health services and receiving high quality care.**
- **Provide additional support to developing quality interpreter services for health care systems.**
- **Enhance training programs for bilingual/bicultural health providers.**
- **Increase integration of health services with social and community services to fully meet the needs of Latino community members.**

Implementing the Culture of Health: Capacity of Community Organizations

The organizational capacities of Latino communities in New Jersey are highly varied. Many of the established Latino organizations grew out of the Puerto Rican community. These programs were initially funded by Model City and Office of Economic Opportunity programs that grew out of the Civil Rights movements of the 1960's. Many of the leaders of larger, more established Latino community organizations remain Puerto Rican as the Puerto Rican community has had more access to higher education and other skills building opportunities due to factors such as citizenship, long tenure in New Jersey and the vision of service through community organizations. At the same time, many smaller community organizations are emerging from newer Latino groups, such as soccer leagues, business associations and cultural organizations. As these are newer and smaller organizations, they can be somewhat weaker organizationally and fiscally. There is a great need to support the development of community organizations for newer Latino groups through mentorship and other efforts to enhance community development. It is also important to build linkages across Latino organizations in the state, such as the NJ Directors' Association, to strengthen advocacy efforts for building a Culture of Health in Latino communities.

Churches, both Catholic and Protestant, continue to play key roles as Latino community organizations. Churches are social hubs in Latino communities; often their priests and pastors

speak Spanish and have been trained in more community oriented theological approaches. Some churches have developed health ministries and other health initiatives that can complement other types of community health efforts. In terms of building a Culture of Health in Latino communities, churches and their leaders are an important part of the effort.

Many Latino health professionals are Puerto Rican and Cuban, again because of greater access to higher education. There are increasing numbers of South American health professionals who have been able to transfer their professional credentials from their home countries to the United States. Programs like the New Brunswick Health and Sciences High School are promoting the next generation of health professionals from less represented Latino groups. It is important to enhance pipeline programs for Latinos into the health professions to increase their representation in the health workforce. There is a great need to expand funding for and increase the number of Federally Qualified Health Centers and other community health initiatives to provide services to the growing Latino communities in New Jersey.

Priorities for Funding

In thinking about building a Culture of Health in Latino communities in New Jersey, there are several priorities for funding (See Figure 3, p. 36). A key priority is to develop health promotion and disease prevention programs to address the declining health of Latino immigrants, often referred to as the Latino Health Paradox. There is a public health imperative to prevent the decline of health among Latino immigrants and to promote the health of the U.S.-born children of those immigrants. For preventative programing to be successful, it must be cognizant of the cultural traditions and community strengths that influence health behaviors within the Latino communities. At the same time, efforts must address the social determinants of health in Latino communities.

Promotores de salud/lay community health workers are an important resource for developing community-based interventions and making connections between the community and health professionals. Through their personal experience and knowledge of the community, *promotores de salud* can establish strong relationships that lead to more effective communication of health promotion strategies. The Centers for Disease Control and Prevention (CDC) have called for the development of *promotores de salud* to help improve health outcomes among Latinos as a strategy. Research projects of Drs. D'Alonzo and Echeverría, co-authors of this White Paper, have demonstrated the effectiveness of building health interventions using community health workers in NJ's immigrant Latino community. Their research has indicated a positive improvement in physical activity and physical fitness among immigrant Latina women. Future funding should be directed towards the expansion of community health workers to improve health among the growing Latino community.

Key health problems of concern are the linked problems of obesity and diabetes. In Mexico during the 2010 celebrations of the Bicentennial of Independence and the Centennial of the Mexican Revolution, a powerful rallying cry to improve dietary health emerged: "*Revoluciona su dieta; declara su independencia de comida chatarra*" [Revolutionize your diet; declare your independence from junk food]. This slogan could serve as a centerpiece for community nutrition interventions, especially in Mexican communities. A key feature of the Culture of Health is promoting access to healthful food and diets for all people living in a community. Farmers markets and advocacy for interventions to eliminate urban food deserts are highly needed. Drs. D'Alonzo and Echeverría have developed innovative interventions to address obesity and risk for diabetes in Latino communities that need to be taken to scale.

There are also important initial and on-going needs for community health impact assessment and program evaluation. As Latino communities grow and diversify, NJ communities need to understand the dynamics of these important communities in our state. As communities develop a range of health promotion and disease prevention programs under the Culture of Health framework, there is a critical need to evaluate their effectiveness both broadly and for specific Latino groups.

Bold and innovative programs to expand health insurance coverage for Latinos, including undocumented immigrants is a high priority. Latinos contribute in myriad ways to the social and economic vitality of New Jersey communities. They need to be included in the benefits of health coverage and quality health care along with all residents of New Jersey.

References

Abraído-Lanza AF, MT Chao, and KR Flórez. 2005. "Do Healthy Behaviors Decline with Greater Acculturation? Implications for the Latino Mortality Paradox." *Social Science & Medicine* 61 (6): 1243–55.

Abraído-Lanza AF, BP Dohrenwend, DS Ng-Mak, and JB Turner. 1999. "The Latino Mortality Paradox: A Test of the 'Salmon Bias' and Healthy Migrant Hypothesis." *American Journal of Public Health* 89 (10): 1543–48.

Alegría M, G Canino, PE Shrout, M Woo, N Duan, D Vila, M Torres, CN Chen, and XL Meng. 2008. "Prevalence of Mental Illness in Immigrant and Non-immigrant U.S. Latino Groups." *American Journal of Psychiatry* 165 (3): 359–69.

Amaro H, and A de la Torre. 2002. "Public Health Needs and Scientific Opportunities in Research on Latinas." *American Journal of Public Health* 92 (4): 525–29.

Barcellos SH, DP Goldman, and JP Smith. 2012. "Undiagnosed Disease, Especially Diabetes, Casts Doubt on Some of Reported Health 'Advantage' of Recent Mexican Immigrants." *Health Affairs (Millwood)* 31 (12): 2727–37.

Bell ML, RD Peng, and F Dominici. 2006. "The Exposure-Response Curve for Ozone and Risk of Mortality and the Adequacy of Current Ozone Regulations." *Environmental Health Perspectives* 114 (4): 532–36.

Berkman ND, DA DeWalt, MP Pignone, SL Sheridan, KN Lohr, L Lux, SF Sutton, T Swinson, and AJ Bonito. 2004. *Literacy and Health Outcomes*. Evidence Report/Technology Assessment no. 87. AHRQ pub. no. 04-E007-2. Rockville, MD: Agency for Healthcare Research and Quality.

Borrell LN, and ND Crawford. 2008. "Disparities in Self-Reported Hypertension in Hispanic Subgroups, Non-Hispanic Black and Non-Hispanic White Adults: The National Health Interview Survey." *Annals of Epidemiology* 18 (10): 803–12.

Brownlee S, JC Cantor, and K Lloyd. 2013. *Covering the Uninsured: Which New Jersey Adults Will Decide to Enroll in 2014?* Facts & Findings: Looking Toward Implementation of the Affordable Care Act. New Brunswick, NJ: Rutgers Center for State Health Policy.

Carter-Pokras O, RE Zambrana, CF Poppell, LA Logie, and R Guerrero-Preston. 2007. "The Environmental Health of Latino Children." *Journal of Pediatric Health Care* 21 (5): 307–14.

CDC (Centers for Disease Control and Prevention). 2004. "Tobacco Use, Access, and Exposure to Tobacco in Media among Middle and High School Students–United States, 2004." *Morbidity and Mortality Weekly Report* 54 (12): 297–301.

CDC (Centers for Disease Control and Prevention). 2015. "Hispanic's Health in the United States."

Cutts DB, AF Meyers, MM Black, PH Casey, M Chilton, JT Cook, J Geppert, S Ettinger de Cuba, T Heeren, S Coleman, R Rose-Jacobs, and DA Frank. 2011. "US Housing Insecurity and the Health of Very Young Children." *American Journal of Public Health* 101 (8): 1508–14.

D'Alonzo KT, S Johnson, and D Fanfan. 2012. "A Biobehavioral Approach to Understanding Obesity and the Development of Obesogenic Illnesses among Latino Immigrants in the United States." *Biological Research for Nursing* 14 (4): 364–74.

Echeverría SE, P Ohri-Vachaspati, and MJ Yedidia. 2015. "The Influence of Parental Nativity, Neighborhood Disadvantage and the Built Environment on Physical Activity Behaviors in Latino Youth." *Journal of Immigrant and Minority Health* 17 (2): 519–26.

Echeverría SE, SR Pentakota, AF Abraído-Lanza, T Janevic, DA Gundersen, SM Ramirez, and CD Delnevo. 2013. "Clashing Paradigms: An Empirical Examination of Cultural Proxies and Socioeconomic Condition Shaping Latino Health." *Annals of Epidemiology* 23 (10): 608–13.

Espino DV, and D Maldonado. 1990. "Hypertension and Acculturation in Elderly Mexican Americans: Results from 1982–84 Hispanic HANES." *Journal of Gerontology* 45 (6): M209–13.

Flegal KM, MD Carroll, CL Ogden, and LR Curtin. 2010. "Prevalence and Trends in Obesity among US Adults, 1999–2008." *Journal of the American Medical Association* 303 (3): 235–41.

Ford ES, C Li, and G Zhao. 2010. "Prevalence and Correlates of Metabolic Syndrome Based on a Harmonious Definition among Adults in the US." *Journal of Diabetes* 2 (3): 180–93.

Fox M, S Entringer, C Buss, J DeHaene, and PD Wadhwa. 2015. “Intergenerational Transmission of the Effects of Acculturation on Health in Hispanic Americans: A Fetal Programming Perspective.” *American Journal of Public Health* 105 (Suppl. 3): S409–23.

Galvez A. 2011. *Patient Citizens, Immigrant Mothers.* New Brunswick, NJ: Rutgers University Press.

Glickman D. 2012. *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*. Washington, DC: National Academies Press.

Goel MS, EP McCarthy, RS Phillips, and CC Wee. 2004. “Obesity among US Immigrant Subgroups by Duration of Residence.” *Journal of the American Medical Association* 292 (23): 2860–67.

Gordon-Larsen P, KM Harris, DS Ward, and BM Popkin. 2003. “Acculturation and Overweight-Related Behaviors among Hispanic Immigrants to the US: The National Longitudinal Study of Adolescent Health.” *Social Science & Medicine* 57 (11): 2023–34.

Guarnaccia PJ, I Martinez, M Silberberg, JC Cantor, and D Davis. 2004. *Health and Health Care for the Residents of New Brunswick: Focus Group Perspectives*. A report of the Rutgers Center for State Health Policy for Healthier New Brunswick 2010. New Brunswick, NJ: Rutgers Center for State Health Policy.

Guarnaccia PJ, IM Pincay, M Alegria, P Shrout, R Lewis-Fernandez, and G Canino. 2007. “Assessing Diversity among Latinos: Results from the NLAAS.” *Hispanic Journal of Behavioral Sciences* 29 (4): 510–34.

Guendelman MD, S Cheryan, and B Monin. 2011. “Fitting in but Getting Fat: Identity Threat and Dietary Choices among U.S. Immigrant Groups.” *Psychological Science* 22 (7): 959–67.

Hoefer M, N Rytina, and B Baker. 2012. *Estimates of the Unauthorized Immigrant Population Residing in the United States: January 2011*. Washington, DC: Office of Immigration Statistics, U.S. Department of Homeland Security.

Kandula NR, M Kersey, and N Lurie. 2004. “Assuring the Health of Immigrants: What the Leading Health Indicators Tell Us.” *Annual Review of Public Health* 25: 357–76.

Kaplan MS, N Huguet, JT Newsom, and BH McFarland. 2004. “The Association between Length of Residence and Obesity among Hispanic Immigrants.” *American Journal of Preventive Medicine* 27 (4): 323–26.

Lara-Riegos JC, MG Ortiz-López, BI Peña-Espinoza, I Montúfar-Robles, MA Peña-Rico, K Sánchez-Pozos, MA Granados-Silvestre, and M Menjivar. 2015. “Diabetes Susceptibility in Mayas.” *Gene* 565 (1): 68–75.

Lloyd K, JC Cantor, D Gaboda, and P Guarnaccia. 2011. *Health, Coverage, and Access to Care of New Jersey Immigrants: Findings from the New Jersey Family Health Survey*. New Brunswick, NJ: Rutgers Center for State Health Policy.

Malmusi D, C Borrell, and J Benach. 2010. “Migration-Related Health Inequalities: Showing the Complex Interactions between Gender, Social Class and Place of Origin.” *Social Science & Medicine* 71 (9): 1610–19.

Markides KS, and K Eschbach. 2005. “Aging, Migration, and Mortality: Current Status of Research on the Hispanic Paradox.” *Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 60 (Spec. No. 2): 68–75.

Martin JA, BE Hamilton, MJ Osterman, SC Curtin, and TJ Mathews. 2015. “Births: Final Data for 2013.” *National Vital Statistics Reports* 64 (1): 1–65.

Martinez Pincay IE, and PJ Guarnaccia. 2007. “’It’s Like Going through an Earthquake’: Anthropological Perspectives on Depression among Latino Immigrants.” *Journal of Immigrant and Minority Health* 9 (1): 17–28.

Mathews MS, PD Sutton, BE Hamilton, and SJ Ventura. 2010. “State Disparities in Teenage Birth Rates in the United States.” *NCHS Data Brief* 46: 1–8.

Morales LS, M Lara, RS Kington, RO Valdez, and JJ Escarce. 2002. “Socioeconomic, Cultural, and Behavioral Factors Affecting Hispanic Health Outcomes.” *Journal of Health Care for the Poor and Underserved* 13 (4): 477–503.

Morales LS, M Leng, and JJ Escarce. 2011. “Risk of Cardiovascular Disease in First and Second Generation Mexican-Americans.” *Journal of Immigrant and Minority Health* 13 (1): 61–68.

Murphey D, L Guzman, and A Torres. 2014. *America's Hispanic Children: Gaining Ground, Looking Forward*. Bethesda, MD: Child Trends.

National Institute for Latino Policy. 2015. "Latino Census Network: Hispanic Heritage Month 2015."

New Jersey Department of Health. *Reporting Requirements for Communicable Diseases and Work-Related Conditions*. Trenton: New Jersey Department of Health.

New Jersey Department of Health and Senior Services. 2003. *Census of Fatal Occupational Injuries (CFOI): New Jersey–2003*. Trenton: New Jersey Department of Health and Senior Services.

Nielsen-Bohlman L, AM Panzer, and DA Kindig, eds. 2004. *Health Literacy: A Prescription to End Confusion*. Washington, DC: National Academies Press.

Nova J, and D Gaboda. 2011. *New Jersey Children without Dental Services in 2001 and 2009*. Facts & Findings: 2009 New Jersey Family Health Survey. New Brunswick, NJ: Rutgers Center for State Health Policy.

Nyberg K, A Ramirez, and K Gallion. 2011. *Physical Activity, Overweight and Obesity among Latino Youth*. Princeton, NJ: Robert Wood Johnson Foundation.

Ogden Cl, MD Carroll, BK Kit, and KM Flegal. 2012. "Prevalence of Obesity and Trends in Body Mass Index among US Children and Adolescents, 1999–2010." *Journal of the American Medical Association* 307 (5): 483–90.

Parra-Cardona JR, LA Bulock, DR Imig, FA Villarruel, and SJ Gold. 2006. "'Trabajando Duro Todos Los Dias:' Learning from the Life Experiences of Mexican-Origin Migrant Families." *Family Relations* 55 (3): 361–75.

Pew Hispanic Center. 2009. *Between Two Worlds: How Young Latinos Come of Age in America*. Washington, DC: Pew Research Center.

Plough AL. 2015. "Building a Culture of Health: A Critical Role for Public Health and Services Systems Research." *American Journal of Public Health* 105 (Suppl. 2): S150–52.

Quintero-Somaini A, M Quirindongo, E Arévalo, D Lashof, E Olson, and G Solomon. 2004. *Hidden Danger: Environmental Health Threats in the Latino Community*. New York: Natural Resources Defense Council.

Ríos-Bedoya CF, and D Freile-Salinas. 2014. "Incidence of Alcohol Use Disorders among Hispanic Subgroups in the USA**."** *Alcohol and Alcoholism* 49 (5): 549–56.

Schwartzberg JG, JB VanGeest, and CC Wang, eds. 2005. *Understanding Health Literacy: Implications for Medicine and Public Health*. Chicago: American Medical Association Press.

Siegel R, D Naishadham, and A Jemal. 2012. "Cancer Statistics for Hispanics/Latinos, 2012." *CA: A Cancer Journal for Clinicians* 62 (5): 283–98.

SIGMA Type 2 Diabetes Consortium. 2014. "Sequence Variants in SLC16A11 Are a Common Risk Factor for Type 2 Diabetes in Mexico." *Nature* 506 (7486): 97–101.

Singh GK, M Siahpush, and MD Kogan. 2010. "Neighborhood Socioeconomic Conditions, Built Environments, and Childhood Obesity." *Health Affairs (Millwood)* 29 (3): 503–12.

Steffen PR, TB Smith, M Larson, and L Butler. 2006. "Acculturation to Western Society as a Risk Factor for High Blood Pressure: A Meta-Analytic Review." *Psychosomatic Medicine* 68 (3): 386–97.

Sundquist J, and MA Winkleby. 1999. "Cardiovascular Risk Factors in Mexican American Adults: A Transcultural Analysis of NHANES III, 1988–1994." *American Journal of Public Health* 89 (5): 723–30.

Suro R. 2003. *Remittance Senders and Receivers: Tracking the Transnational Channels*. Washington, DC: Pew Research Center.

Sutton MY, R Patel, and EL Frazier. 2014. "Unplanned Pregnancies among HIV-Infected Women in Care–United States." *Journal of Acquired Immune Deficiency Syndromes* 65 (3): 350–58.

Taningco MTV. 2007. *Revisiting the Latino Health Paradox*. Los Angeles: Tomás Rivera Policy Institute.

Tienda M, and F Mitchell, eds. 2006. *Hispanics and the Future of America*. Washington, DC: National Academies Press.

United States Census Bureau/American Fact Finder. 2013. “Additional Types of Transportation - All Occupied Units (SELECTED METROPOLITAN AREAS): 2013 American Housing Survey” Summary Table S-04C-AO-M.

United States Census Bureau/American Fact Finder. 2013. “Housing and Neighborhood Search and Satisfaction - Renter-Occupied Units (SELECTED METROPOLITAN AREAS): 2013 American Housing Survey” Summary Table C-07-RO-M.

United States Census Bureau/American Fact Finder. 2013. “Neighborhood - All Occupied Units (SELECTED METROPOLITAN AREAS): 2013 American Housing Survey” Summary Table S-03-AO-M.

United States Census Bureau/American Fact Finder. 2013. “Selected Housing Characteristics 2006–2010, American Community Survey Selected Population Tables” Summary Table DP04.

United States Census Bureau/American Fact Finder. 2014. “DEMOGRAPHIC CHARACTERISTICS FOR OCCUPIED HOUSING UNITS: 2014 American Community Survey 1-Year Estimates” Summary Table S2502.

United States Department of Health and Human Services. 2011. National Health and Nutrition Examination Survey (NHANES), 2003–2006.

University of Wisconsin Population Health Institute. 2015. *2015 County Health Rankings: New Jersey*. Madison: University of Wisconsin Population Institute.

Unnatural Causes. 2008. San Francisco, CA: California Newsreel.

Vaeth PA, and DL Willett. 2005. “Level of Acculturation and Hypertension among Dallas County Hispanics: Findings from the Dallas Heart Study.” *Annals of Epidemiology* 15 (5): 373–80.

Vargas-Ramos C. 2005. *The State of Housing for Hispanics in the United States*. Policy Brief, vol. 2, no. 1. New York: Centro de Estudios Puertorriqueños, Hunter College (CUNY).

Vega WA, S Aguilar-Gaxiola, L Andrade, R Bijl, G Borges, JJ Caraveo-Anduaga, DJ DeWit, SG Heering, RC Kessler, B Kolody, KR Merikangas , BE Molnar, EE Walters, LA Warner, and HU Wittchen. 2002. “Prevalence and Age of Onset for Drug Use in Seven International Sites: Results from the International Consortium of Psychiatric Epidemiology.” *Drug and Alcohol Dependence* 68 (3): 285–97.

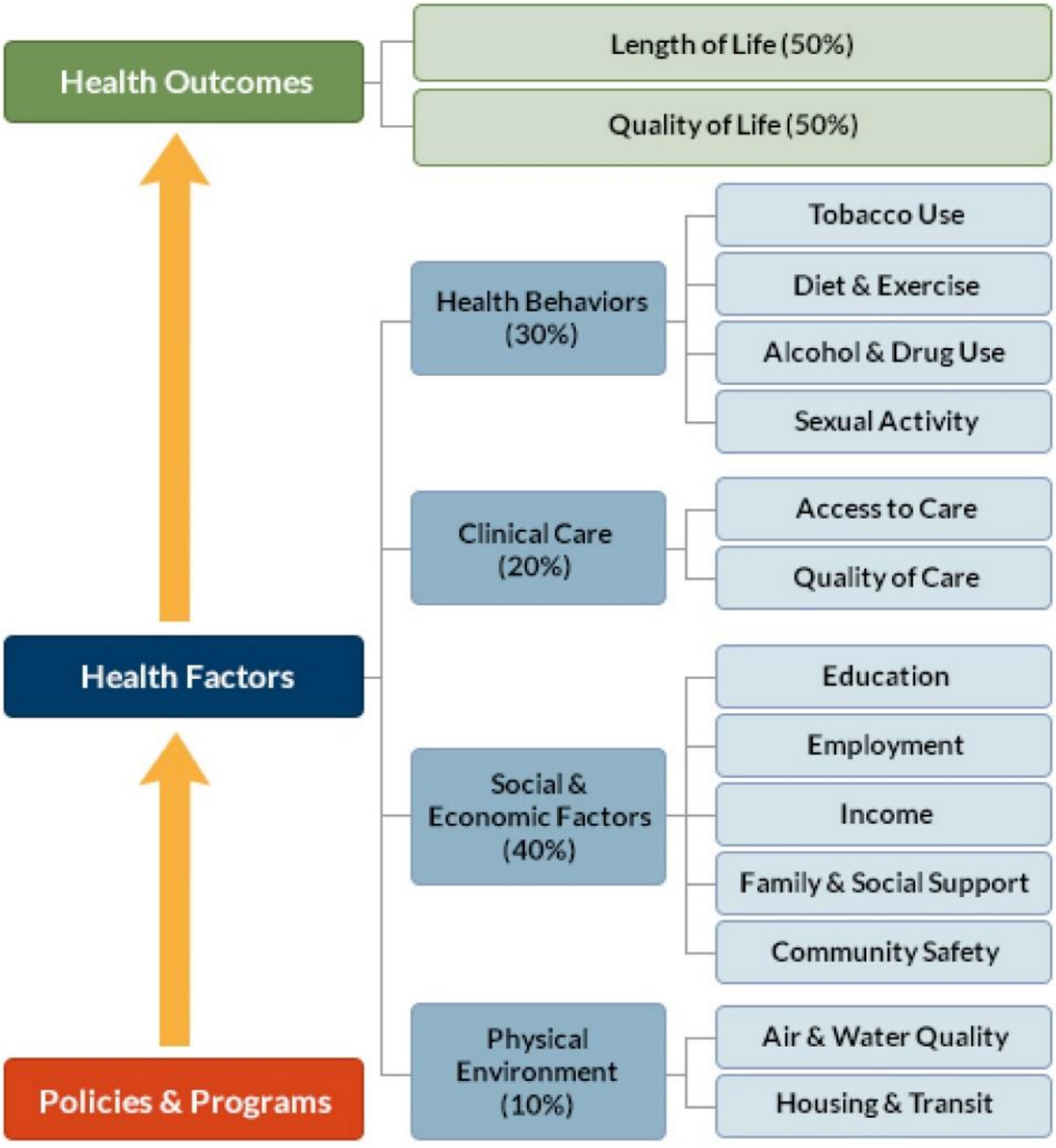
Wu S-Y. 2011. *People from Many Nations Form New Jersey’s Hispanic Population*. NJ Labor Market Views, no. 14. Trenton: New Jersey Department of Labor and Workforce Development.

Appendix

- **Model of the Culture of Health**
- **Maps of Hispanic Demographic and NJ County Health Rankings Data[1]**
- **Model for Building a Culture of Health among Latinos in NJ**

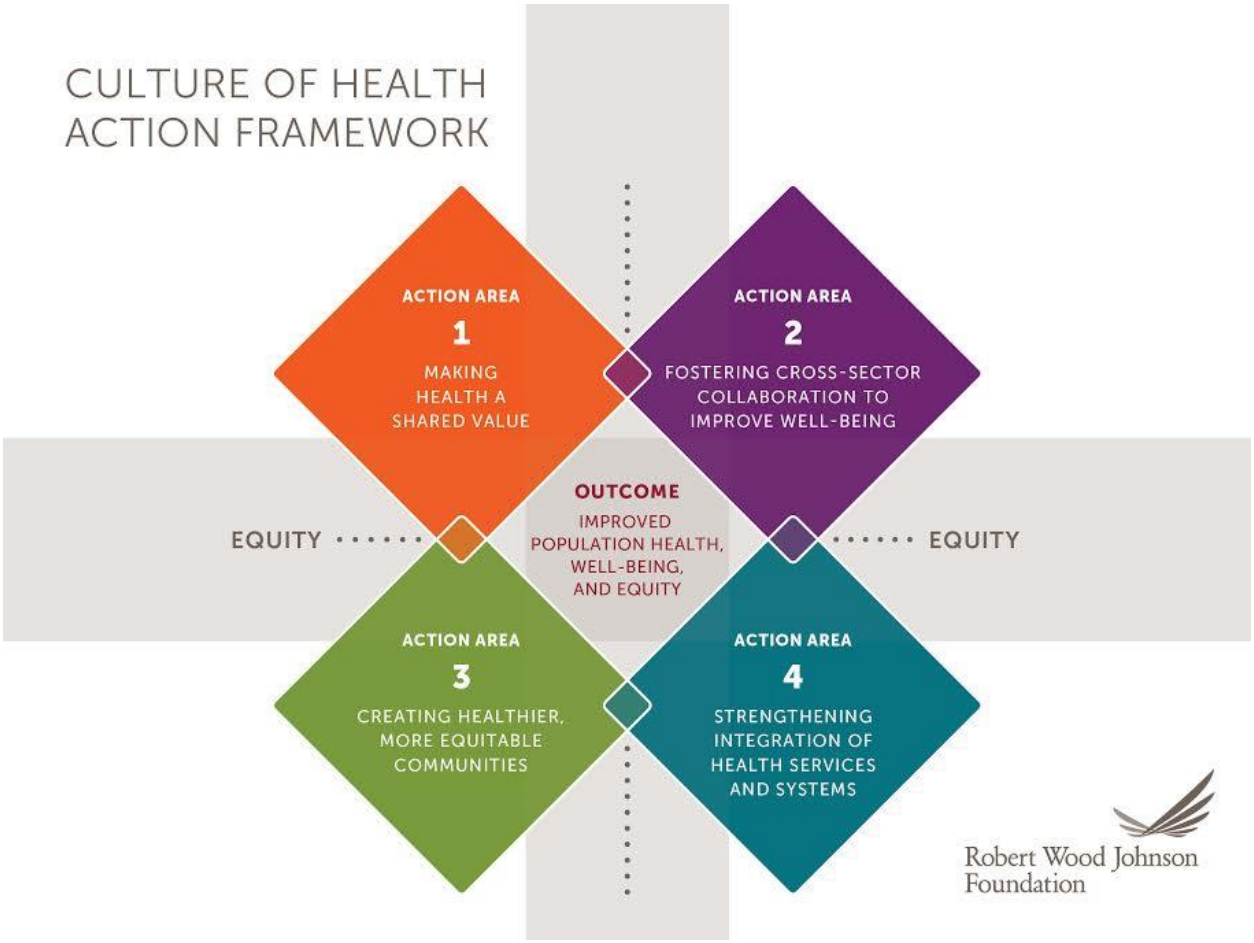
[1] The County Health Rankings maps on pages 34 and 35 display New Jersey's counties divided into groups by health rank. The lighter colors indicate better performance in the respective health rankings. The green map shows the distribution of summary health outcomes, which measure premature death and healthy quality of life. The blue displays the distribution of the summary rank for health factors, which include health behaviors, access to care, social and economic factors, and the physical environment. Maps help locate the healthiest and least healthy counties in the state. The health factors map appears similar to the health outcomes map, showing how health factors and health outcomes are closely related.

Figure 1: Model of the Culture of Health

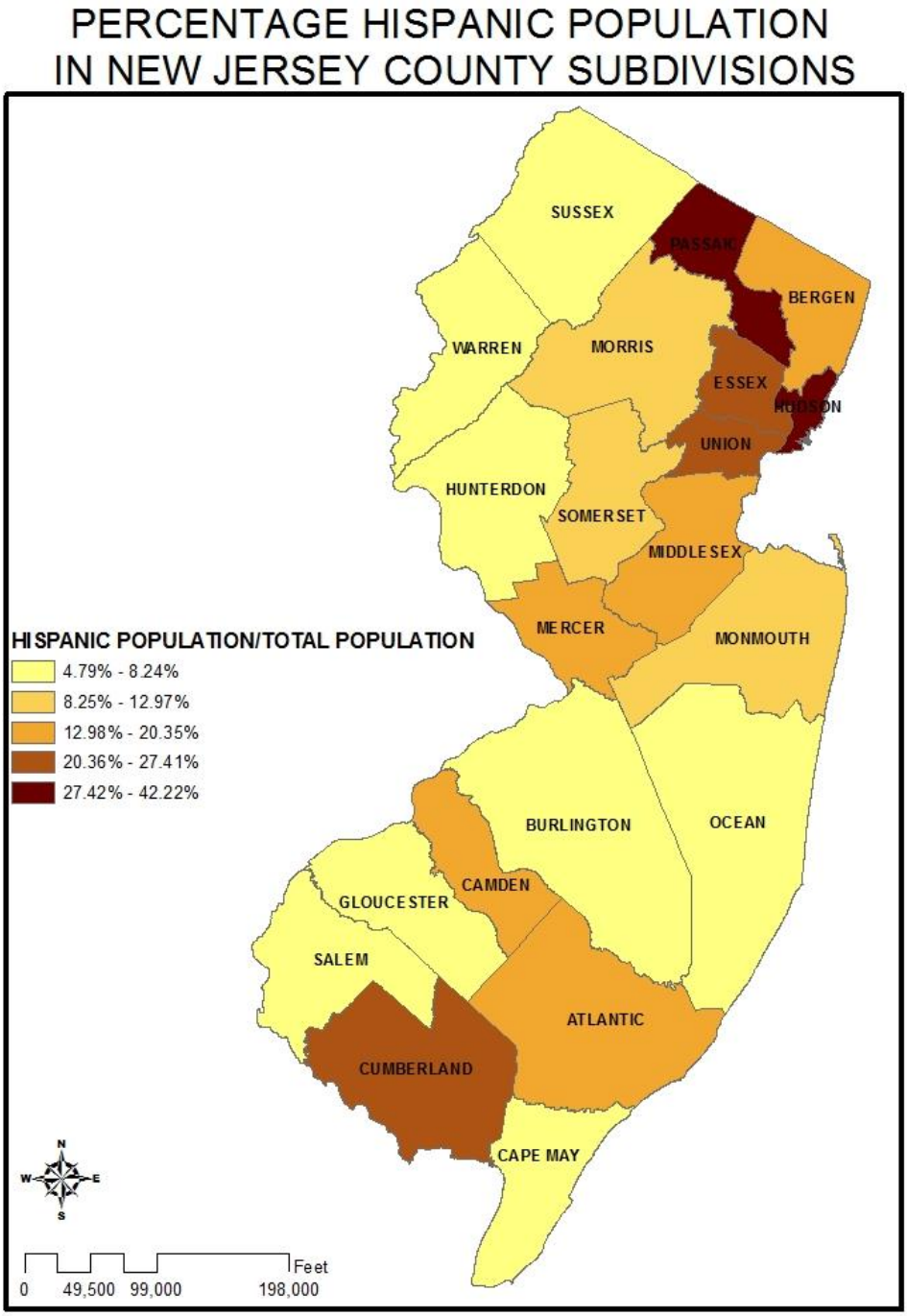


Source: University of Wisconsin Population Health Institute. 2015. *2015 County Health Rankings: New Jersey*. Madison: University of Wisconsin Population Institute. http://www.countyhealthrankings.org/sites/default/files/state/downloads/CHR2015_NJ.pdf.

Figure 2: Culture of Health Action Framework

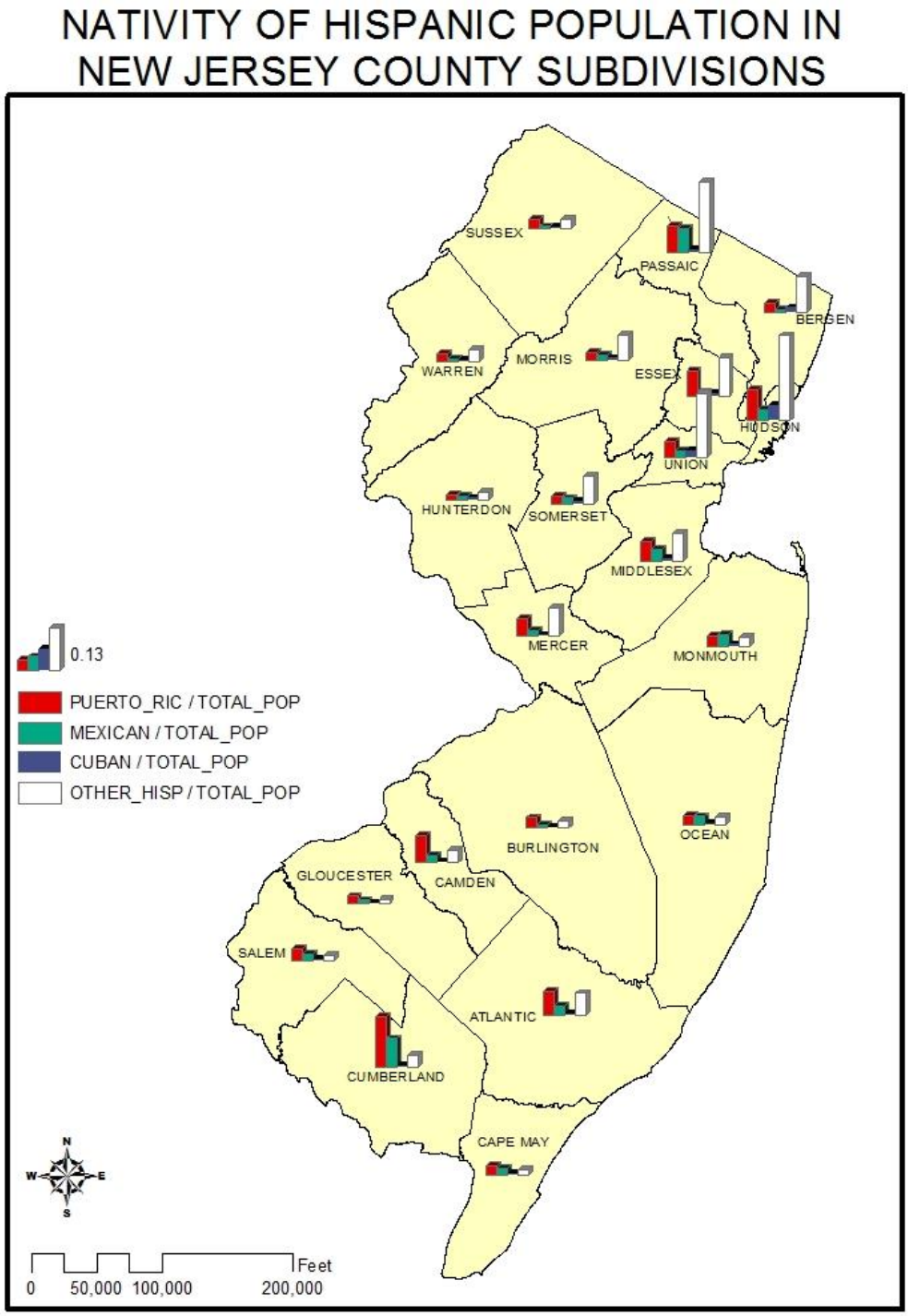


Map 1: Hispanic Concentrations in NJ Counties



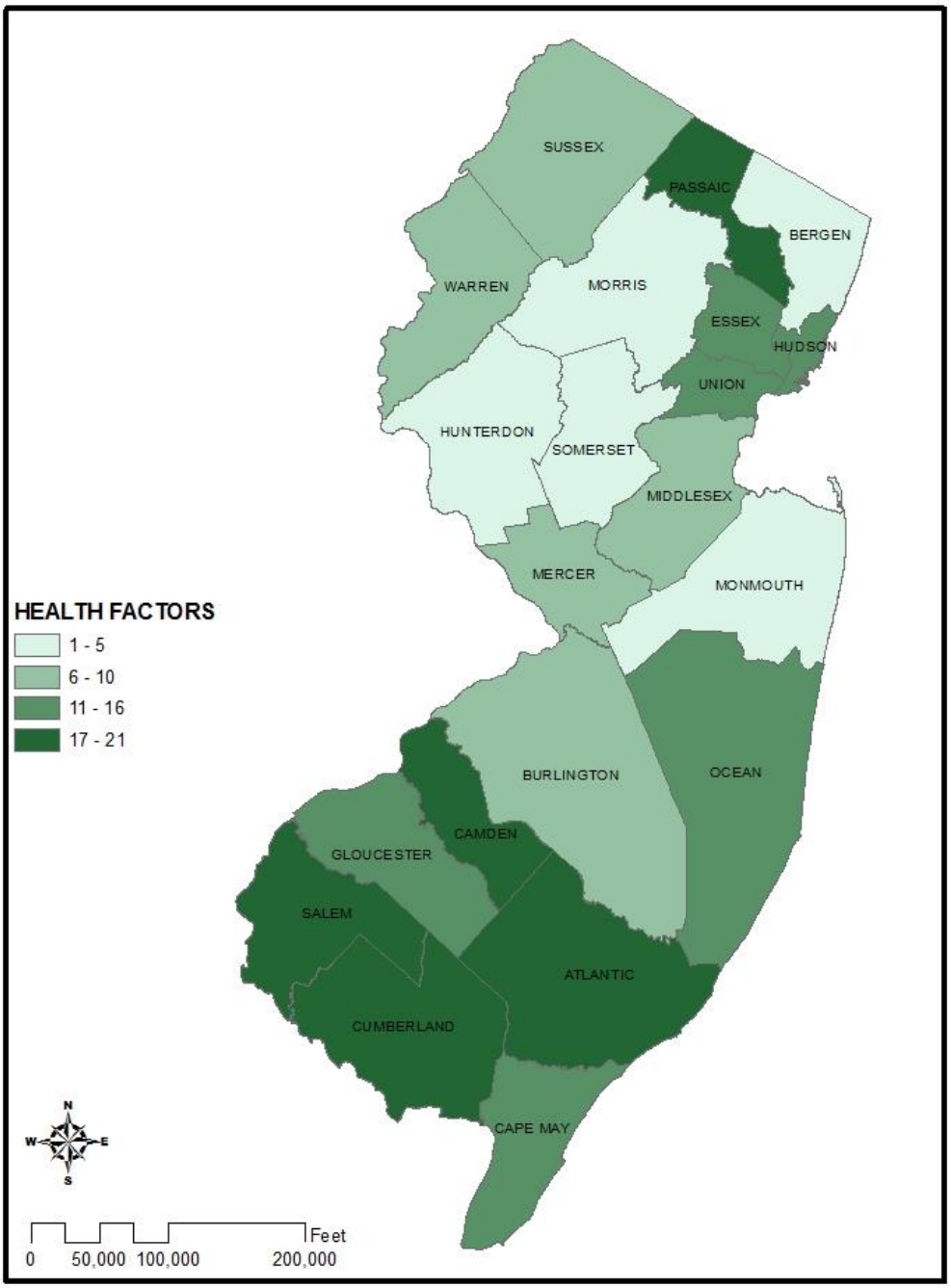
Source: U.S. Census Bureau:2008-2012 American Community Survey 5-Year Estimates

Map 2: Hispanic Groups in NJ Counties



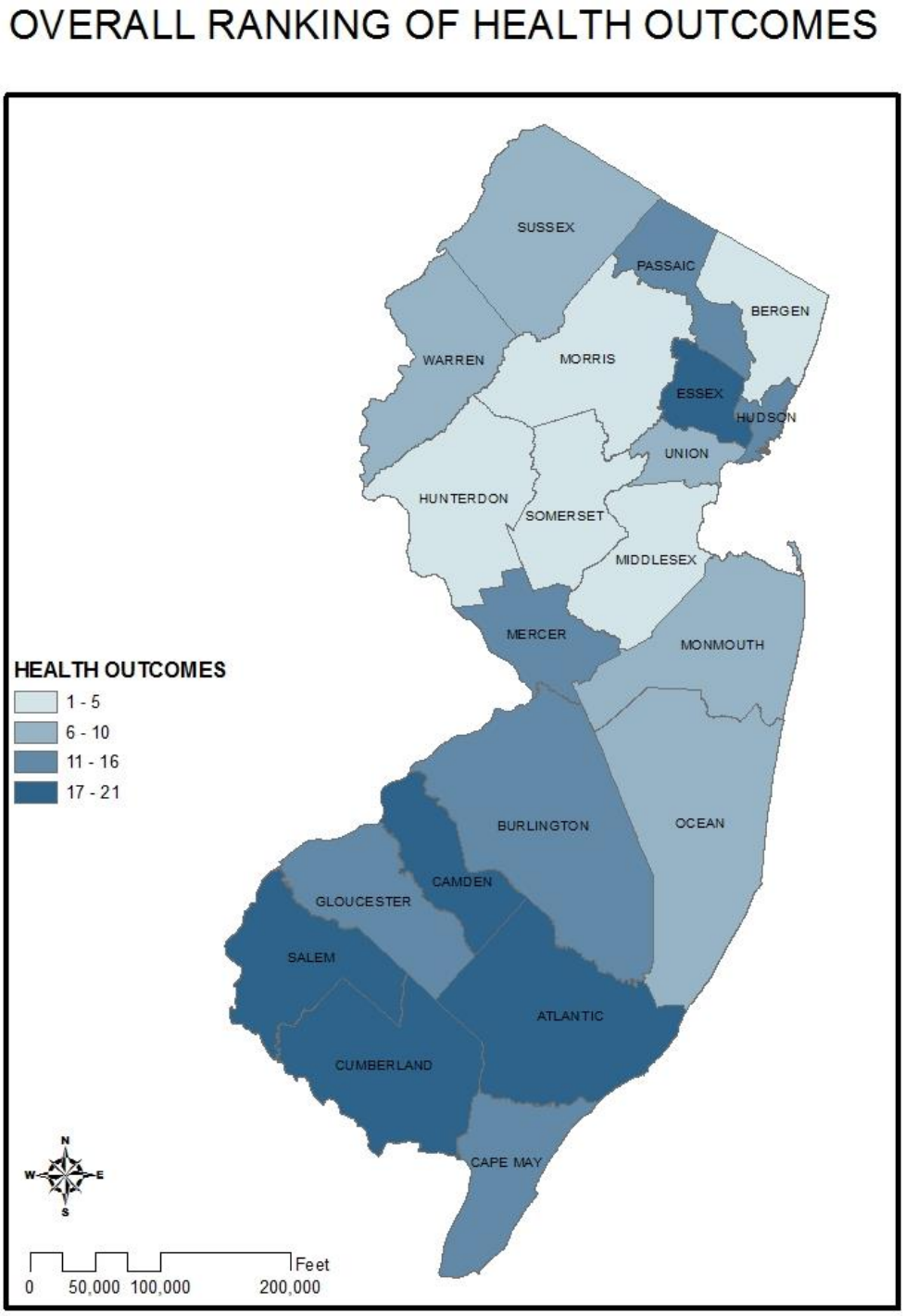
Source: U.S. Census Bureau 2008-2012 American Community Survey 5 year estimates

Map 3: NJ County Health Rankings: Health Factors



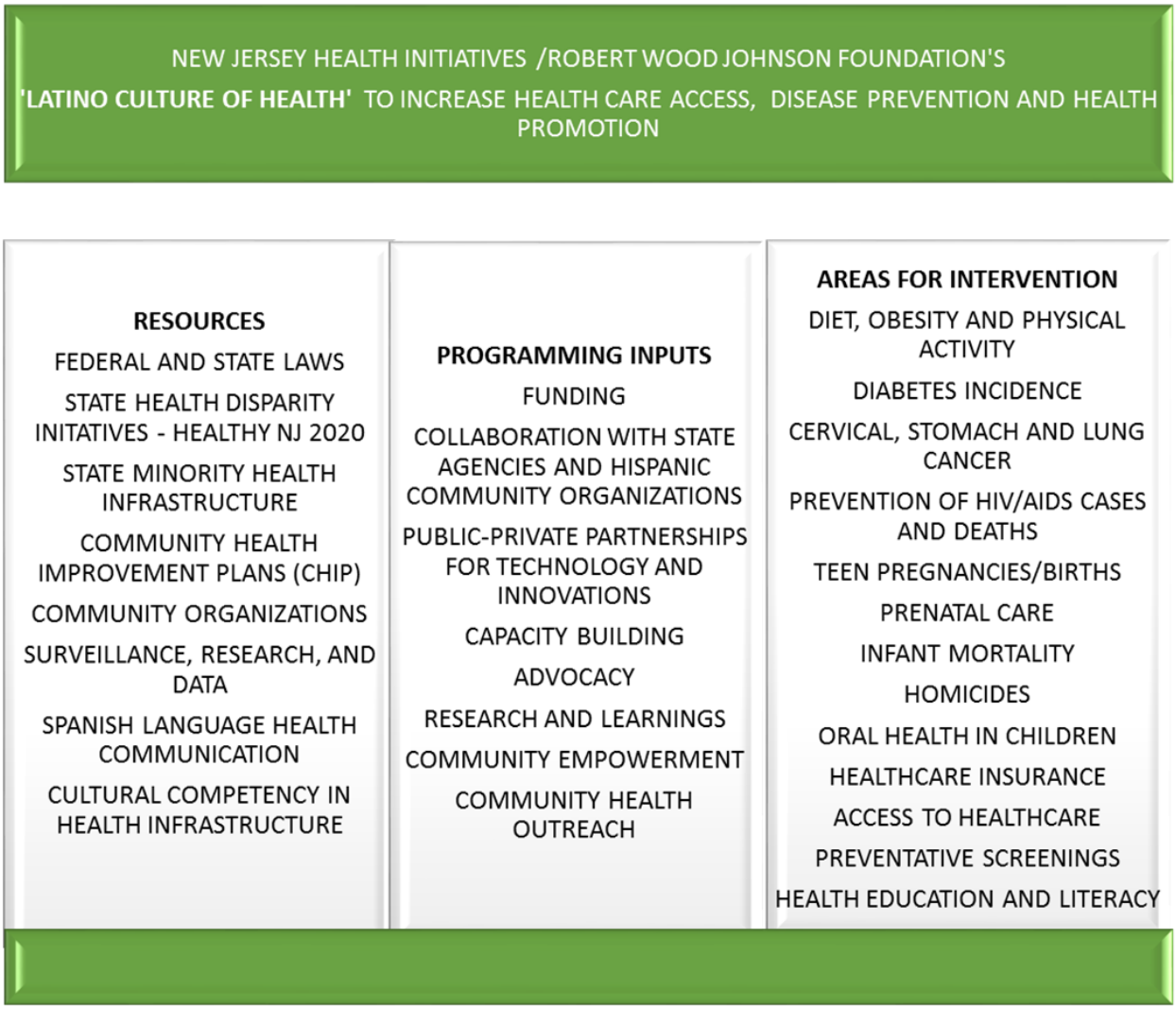
Source: County Health Ranking and Roadmaps, University of Winsconsin & Robert Wood Johnson Foundation

Map 4: NJ County Health Rankings: Health Outcomes



Source: County Health Ranking and Roadmaps, University of Winsconsin & Robert Wood Johnson Foundation

Figure 3: Model for Building a Culture of Health among Latinos in NJ



RUTGERS

Center for State Health Policy

Center for State Health Policy
Rutgers, The State University of New Jersey
112 Paterson Street, 5th Floor
New Brunswick, NJ 08901

p. 848-932-3105 f. 732-932-0069
cshp_info@ifh.rutgers.edu
www.cshp.rutgers.edu