

Hispanic Older Adult Health & Longevity in the United States: Current Patterns & Concerns for the Future

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Abstract: The Hispanic population aged sixty-five and over – the most socioeconomically disadvantaged subset of America’s elderly – is projected to quintuple between 2012 and 2050. While current longevity patterns for Hispanics relative to whites are favorable, old-age functioning and disability patterns for Hispanics are unfavorable and have serious implications for caregivers; families; and local, state, and federal governments. Troubling signs for the future Hispanic population (which are shared to varying degrees with other vulnerable groups) include the unresolved legal status of unauthorized immigrants, continued low levels of insurance coverage even after health care reform, some unfavorable trends in health behaviors, and continued disadvantages in educational attainment and income relative to whites. We urge policy-makers to deal with these potentially problematic health and well-being issues. Not doing so could have detrimental consequences for the future of the Hispanic population as well as other at-risk groups and, by extension, the U.S. elderly population as a whole.

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Demographic data make clear that Hispanics will play an increasingly prominent role in the overall health profile of U.S. society as the twenty-first century progresses. By the year 2000, Hispanics had become the country’s largest minority group at just over 35 million people, or one-eighth of the total population. Between 2000 and 2010, the Hispanic population grew an additional 43 percent to over 50 million people and increased its share of the population to 16.3 percent.¹ Furthermore, the U.S. Census Bureau projects that the Hispanic population will grow to 112 million by 2050 and account for 28 percent of the total population.² Should the reality of future population changes come anywhere close to Census Bureau projections – and at present we see no reason why it will not – it is straightforward to see that the future health patterns of U.S. society will increasingly reflect those of the Hispanic population. (For a detailed discussion of demographic changes in the His-

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doi:10.1162/DAED_a_00327

panic population, see S. Jay Olshansky's essay on demographic transformation in this volume.)

In addition to growing precipitously, the Hispanic population is rapidly aging and will make up a progressively larger share of the older population in the coming decades. Indeed, the Census Bureau projects that the population of Hispanics over sixty-five will quintuple between 2012 and 2050, growing from 3.1 million to 15.4 million. In percentage terms, while Hispanics now compose just over 7 percent of the nation's population over sixty-five, that figure is projected to increase to over 18 percent in 2050.³

Rapid Hispanic population growth and aging mean that it is important to understand current health and longevity patterns among Hispanics and consider how such patterns may change given the social, behavioral, and policy contexts of the United States. Simply put, a more complete understanding of current Hispanic health and longevity patterns will undoubtedly shed light on what future patterns may look like. But at the same time, we cannot assume that the Hispanic health and longevity patterns of tomorrow will necessarily reflect those of today; indeed, some of the social, behavioral, and policy contexts in which Hispanic health and longevity patterns are unfolding are unfortunately less than favorable.

This essay first provides an overview of current longevity and health patterns for the older Hispanic population. We make frequent comparisons with non-Hispanic whites (hereafter, "whites"), the nation's largest and most socioeconomically advantaged demographic subpopulation. This description is not straightforward, because Hispanics are heterogeneous in their nativity and national-origin composition. Moreover, complex data-quality issues have made the accurate documentation of Hispanic longevity and health pat-

terns a challenging endeavor. Following this overview, we discuss four key issues – undocumented immigrant status, health insurance coverage, trends in important health behaviors, and continued socioeconomic status disadvantages – that will likely have important impacts on the future health and longevity patterns of the rapidly aging Hispanic population. We conclude by urging a forward-thinking policy agenda that will have the greatest chance of enhancing the health and longevity profile of America's largest minority group in the decades ahead.

Despite having a much higher level of poverty and substantially lower levels of educational attainment and health insurance coverage than whites, Hispanics currently live longer lives, on average, than their more socioeconomically advantaged counterparts. The combination of greater Hispanic longevity in the context of lower socioeconomic status has long been considered an epidemiologic paradox (often called the "Hispanic paradox").⁴ While the quality of Hispanic mortality data used to demonstrate this epidemiologic paradox has been debated, recent very high-quality studies using different data sets and methodologies have convincingly documented Hispanics' greater longevity.⁵ Table 1, for example, provides estimates of life expectancy at age sixty-five for Hispanics and whites from two national data sources. The table illustrates that Hispanic life expectancy at age sixty-five is about two years longer than that of whites, with only minor variations across data sources and by gender.

The Hispanic longevity advantage over whites varies by both nativity and national origin. While U.S.-born Hispanics have no appreciable longevity advantage relative to whites, foreign-born Hispanics exhibit a substantial advantage. For example, estimated life expectancy at age sixty-five for

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Table 1
Estimates of Remaining Life Expectancy at Age Sixty-Five for Hispanics and Non-Hispanic Whites from Two National Data Sources

	Women		Men	
	NVSS	NHIS-LMF	NVSS	NHIS-LMF
Hispanics	21.7	21.9	19.0	18.8
Non-Hispanic Whites	19.7	20.3	17.1	16.8

“NVSS” represents National Vital Statistics System, 2006 data; “NHIS-LMF” represents National Health Interview Survey-Longitudinal Mortality Follow-Up, 1989–2006 data. Sources: Elizabeth Arias, “United States Life Tables by Hispanic Origin,” *Vital and Health Statistics Series 2, No. 152* (Hyattsville, Md.: National Center for Health Statistics, 2010), 1–35; and Joseph T. Lariscy, Robert A. Hummer, and Mark D. Hayward, “Hispanic Older Adult Mortality in the United States: New Estimates and An Assessment of Factors Shaping the Hispanic Paradox,” *Demography* 52 (1) (2015).

foreign-born Hispanic women is three years longer than for white women.⁶ The most important reasons for the exceptionally favorable longevity patterns for foreign-born Hispanics include positive health selection at the time of immigration (that is, healthier individuals are more likely to migrate) and favorable health-related behavior, particularly low levels of cigarette smoking.⁷

Across national-origin groups, most studies report higher life expectancy for Hispanics who originate from Cuba and other countries in Central and South America, lower life expectancy among Puerto Ricans, and life expectancy figures for Mexican-origin Hispanics that are very similar to those of all Hispanics. Lower life expectancy (that is, higher mortality rates) for Puerto Rican-origin Hispanics have been attributed to their lower level of healthy immigrant selection (since Puerto Ricans are U.S. citizens and easily migrate between Puerto Rico and the U.S. mainland) and their low socioeconomic status. Cubans, on the other hand, are thought to be characterized by healthier selection profiles at time of immigration and have long experienced a positive reception into the middle class of U.S. society.⁸ Low rates of smoking (and lighter smoking among those who do

smoke) have recently been found to be an important explanation for the low mortality rates exhibited by older Mexican immigrants, who are also characterized by healthy selection at time of immigration.⁹

While longevity patterns for older Hispanics, particularly the foreign-born, are clearly favorable in comparison with whites, this is not the case in other health domains. For example, levels of physical disability among older Hispanics – both U.S.- and foreign-born – are significantly worse than those of whites at age sixty-five and above. Foreign-born Hispanic women have the highest level of physical disability when compared with U.S.-born whites, blacks, and Hispanics and, thus, they are characterized among these groups by the unique combination of the longest life expectancy coupled with the longest average period of time spent disabled.¹⁰ This is not to minimize the importance of the high levels of physical disability also exhibited by U.S.-born Hispanic women and men, who share similar disability profiles with black women and men. At older ages, both foreign-born and U.S.-born Hispanic women also exhibit lower levels of physical functioning (for example, gait speed and grip strength) than whites and similar levels as blacks.¹¹

Clearly, more research is needed to understand why relatively long lives among Hispanics are not coupled with low levels of disability and high levels of physical functioning. One of our working hypotheses is that many Hispanics experience pronounced “wear and tear” after years and years working in physically demanding occupations (such as in hospitality and food service, child care, domestic service, construction, agriculture, and meat processing), placing them at disproportionate risk of physical difficulties and disability at older ages, even in the context of their relatively long lives. Long-term exposure to adverse socioeconomic conditions – for example, higher rates of child poverty and lower levels of educational attainment than whites – may also be partly responsible for their disadvantaged patterns of disability and physical functioning.

Hispanics also exhibit higher rates of some, but not all, chronic morbidities in comparison with whites. Obesity, diabetes, and overall metabolic risk, for example, are higher in most studies of middle-aged and older Hispanics (both foreign- and U.S.-born) compared to whites; some (though not all) studies also document somewhat higher levels of hypertension among foreign- and U.S.-born Hispanics than among whites.¹² U.S.-born Hispanics have also been shown to have moderately higher levels of inflammation risk compared with whites.¹³ On the other hand, other morbidity rates are lower for Hispanics. Of greatest significance, most studies find a lower prevalence of cancer (with some site-specific exceptions) and lung disease among both foreign-born and U.S.-born Hispanics compared with whites – patterns consistent with Hispanics’ historically much lower levels of cigarette consumption.¹⁴ Lower cancer- and lung disease-related morbidity among Hispanics relative to whites aligns with the significantly lower all-site cancer, lung cancer,

and respiratory disease mortality exhibited by both foreign- and U.S.-born Hispanics.¹⁵ Lower heart disease mortality among older Hispanics (particularly the foreign-born) is also associated with their lower levels of cigarette smoking.

This brief overview clearly shows that, at present, both Hispanic women and men have lower overall mortality rates and longer life expectancies than their more socioeconomically advantaged white counterparts. The longer life-expectancy levels for Hispanics are concentrated among the foreign-born and characterize most, but not all, of the national-origin Hispanic subgroups. Again, healthy immigrant selection to the United States and positive health behavior – particularly lower cigarette consumption relative to whites – seem to be the keys to this epidemiologic paradox of longevity. For the Hispanic population, this is all good news. Unfortunately, as we have shown, not all of the news is good. Perhaps most disturbing are the very high levels of disability and poor physical functioning among older Hispanics, which will increasingly challenge caregivers, families, health agencies, and governments in a rapidly aging population. High levels of diabetes and metabolic risk among middle-aged and older Hispanics, particularly the U.S.-born, also pose looming challenges. Our attention now turns to four of the key health-related concerns facing the rapidly growing and aging Hispanic population.

The success or failure of U.S. immigration policy to effectively respond to the roughly 11 million undocumented residents (approximately three-fourths of whom are Hispanic) will have long-term consequences for health and longevity patterns among older Hispanics.¹⁶ In an important essay in the Summer 2013 issue of this journal, sociologist Douglas Massey argued that rapid growth in the undocumented population between 1965 and 2008 was an

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unintended consequence of U.S. immigration and border control policies in conjunction with the simultaneous increase in the economic and social integration of Mexico and the United States. He further argued that a path to citizenship for undocumented residents of the United States is a necessary and critical step toward the future social and economic well-being of Hispanics in U.S. society.¹⁷

Massey's arguments are directly relevant to the future health and longevity of the aging Hispanic population in at least two important ways. First, the growth in the undocumented immigrant population means that a significant portion of the U.S. population is largely invisible in the country's data monitoring systems. Thus, there are no credible estimates of mortality rates, disability levels, or morbidity patterns at the national level for this sizable subgroup (roughly 3.5 percent) of the U.S. population. An unknown number of undocumented residents may be included in health surveys, census records, and vital statistics, but it is difficult or impossible to know with any certainty how their health patterns compare to other subgroups or to the population as a whole. Despite their statistical invisibility, there are reasons to suspect that the health and longevity patterns for undocumented immigrants are not very good. For example, estimates from the Pew Hispanic Center show (not surprisingly) that undocumented immigrants have substantially lower household incomes and lower levels of insurance coverage than the U.S.-born resident population.¹⁸ Moreover, while the vast majority of undocumented Hispanic residents of the United States are currently between the ages of twenty and fifty, the clock is ticking and these undocumented adult immigrants will move into old age near mid-century. The poor wages, harsh working conditions, high levels of stress and fear, and lack of access to health care

and social services that characterize many undocumented immigrants will undoubtedly have negative health consequences for this segment of the U.S. population in the decades to come.

Second, policies focused on undocumented immigrants are very likely to have important spillover effects on children of immigrants as well as on the Hispanic community as a whole. An estimated 73 percent of children of undocumented immigrants are U.S.-born citizens; thus, the future health and well-being of these children will also be in part dependent upon the resolution of their parents' legal status.¹⁹ While data are not available to assess the relationship between parents' legal status and children's well-being, there is a substantial body of evidence pointing to the pernicious effects of poverty and family stress for children's long-term health. Thus, the health of children of undocumented immigrants is in a very real sense the embodiment of parents who live with substantial uncertainty and stress and who lack access to basic social services, health care, and legal rights. More generally, the issue of immigrant legal status has been a critical one in the Hispanic community for decades, and the intensity of the debate has only increased in the fourteen years following the 9/11 terrorist attacks, given stricter U.S. border controls. A positive solution to the legal status of the United States' 11 million undocumented immigrants, 8 million of whom are Hispanic, would be critical to all Hispanics achieving the full integration that is fundamental to their long-term health and well-being. A federal policy that encourages legalization of undocumented immigrants in a humane and healthy way will substantially strengthen the prospects of favorable future health and longevity patterns among older Hispanics.

A second major health concern for Hispanics stems from the exclusion of undoc-

umented immigrants from purchasing health insurance under the provisions of the 2010 Patient Protection and Affordable Care Act (ACA).²⁰ This results in significant barriers for undocumented immigrants seeking health services – including emergency care – compared to both legal immigrants and those born in the United States. Undocumented immigrants are less likely to seek care, and when they do, they are at greater risk of presenting more advanced and complicated health problems and developing functional limitations and disabilities downstream.²¹ Undocumented status and lack of access to health insurance coverage are thus inextricably linked with the ACA for 8 million or so Hispanics, and this link has direct ramifications for Hispanic health far into the future.

Compounding this situation is the already low level of health insurance coverage for the Hispanic population as a whole: the U.S. Census Bureau estimated that 29.1 percent of the Hispanic population (15.5 million) was uninsured in 2012 (down from over 30 percent in 2011), the highest proportion by far of any ethnic group in the country.²² Thus, even if every single undocumented Hispanic resident of the United States suddenly purchased health insurance coverage, there would still be at least 7.5 million uninsured Hispanic residents in the United States – around 15 percent of the Hispanic population. This 7.5-million figure includes both legal Hispanic immigrants as well as U.S.-born Hispanics.

A 2014 Gallup Poll provides estimates of racial/ethnic differences in ACA uptake among the previously uninsured population.²³ Less than 11 percent of uninsured Hispanics obtained coverage during the open-enrollment period, compared with 16 percent increases for blacks and 14 percent for whites. This is a worrisome pattern given the overall lower level of insurance coverage among Hispanics prior to the pas-

sage of the ACA. A key structural barrier to health insurance coverage among both the legal immigrant and U.S.-born segments of the Hispanic population is the limited eligibility for low-income adults of all racial/ethnic groups to qualify for Medicaid coverage in states that thus far have decided not to expand Medicaid coverage under the ACA (these include Texas, Florida, Georgia, and twenty-one others).²⁴ As with immigration policy toward undocumented residents, this policy issue may not necessarily be harming the overall health and longevity patterns of current older-aged Hispanics, the vast majority of whom are legal residents of the United States and have health insurance coverage through Medicare. However, it is critical to keep in mind that the older-aged Hispanic population of tomorrow is the working-aged Hispanic population of today; this group's current health insurance coverage may help determine whether they are healthy and disease-free in older adulthood or whether, on the contrary, they develop conditions that could have been treated much earlier in life or avoided altogether.

The third major health concern for Hispanics is rooted in two key health-related behaviors: smoking and the combination of poor nutrition and low physical activity that results in obesity. Smoking and obesity have long been identified as the two most important behavior-related causes of poor health and premature death in the United States. National trends in obesity and smoking point to the potential erosion of Hispanics' current advantage in life expectancy relative to whites and a widening of Hispanics' existing disadvantages in old-age disability and physical functioning. With respect to obesity, recent studies have projected that a long-term increase in the prevalence of obesity will reduce U.S. life expectancy in the future.²⁵ Although none of this work has directly

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examined Hispanics, it is very likely that Hispanics will disproportionately bear the brunt of this effect. Obesity prevalence has increased precipitously in countries from which many Hispanic immigrants originate, particularly Mexico,²⁶ and it has increased disproportionately among Hispanics in the United States.²⁷ Given the high-calorie, high-fat diets that have become characteristic of the United States and Mexico in the last several decades, dietary behavior will need to change quickly and in dramatic ways for adverse health and longevity consequences among Hispanics to be minimized. As emphasized above, it is not necessarily current older-aged Hispanics who are at particular risk; rather, the much larger group of working-age Hispanics (who will become tomorrow's elderly Hispanics) are facing this growing threat.

On the upside, recent work also shows that future declines in overall U.S. life expectancy due to increasing obesity may be counterbalanced by life expectancy increases resulting from decreases in smoking.²⁸ That said, the relative balance of obesity and smoking effects could differ substantially for Hispanics in comparison with the U.S. population as a whole. Hispanics have smoked less in the past and continue to smoke less than either whites or blacks. This lower level of smoking is responsible for up to one-half of Hispanics' current life expectancy advantage over whites.²⁹ However, this smoking-related advantage for Hispanics may be diminishing as blacks and whites catch up. Lung cancer incidence and mortality rates for white and black men have declined precipitously since 1999, while the same rates for Hispanic men have declined only modestly.³⁰ Women's lung cancer death rates for all racial/ethnic groups have remained stable since the late 1990s, with the rate for Hispanics considerably lower than both whites and blacks; however, both

white and black women's smoking levels have exhibited rapid declines in recent decades while Hispanic women's levels have remained about the same, suggesting that white and black women's lung cancer rates will also soon begin to fall while Hispanic women's rates will not.³¹ Thus, on the whole, the advantage relative to other groups that U.S. Hispanics have from smoking less may be disappearing. With the disproportionate and precipitous rise in obesity among Hispanics compared to whites, then, Hispanics' current life-expectancy advantage may well become a disadvantage in the not-too-distant future.

The fourth concerning factor for future old-age Hispanic health and longevity patterns is their continued disadvantaged socioeconomic profile. One might ask why this is concerning, given that current Hispanic old-age mortality rates and life expectancy levels are favorable compared to whites (as reviewed above), despite the overall low socioeconomic status of the Hispanic population. After all, does not the combination of relatively high life expectancy despite socioeconomic disadvantage define the epidemiologic paradox? Two points are worth noting. First, our recent work demonstrates that current older-aged Hispanics would have even lower mortality rates and higher life expectancies than they already have if their levels of education and income were similar to those of whites.³² In other words, Hispanic longevity patterns are not immune to low socioeconomic status. Second, socioeconomic resources are perhaps more fundamentally important for individual-level health in the United States than ever before in our nation's history.³³ Characteristics such as educational attainment, stable employment, decent income, and wealth holdings provide individuals with access to flexible resources – goods, information, technologies, social ties, and psycho-social re-

sources – that are particularly important for negotiating health-related behavior and care in the hyper-competitive and information-based twenty-first century.

Looking ahead, there is no logical reason why Hispanic health outcomes will not be influenced by socioeconomic status, as they are in other racial/ethnic groups. For the country as a whole, life expectancy has risen disproportionately among persons with a college-level education or higher, while less-educated adults have actually experienced a decrease in life expectancy in recent decades.³⁴ Yet unfortunately, Hispanic adults currently have the lowest rate of college (and high school) graduation out of all other U.S. racial/ethnic groups.³⁵ It is not surprising, then, that Hispanics are concentrated in low-wage service-sector jobs. In addition, Hispanic households hold, on average, less than 6 percent of the wealth that white households do; this gap has widened considerably in recent years.³⁶ Hispanic socioeconomic disadvantages relative to whites persist even to the second- and third-generation U.S.-born Hispanics.³⁷ Such pronounced socioeconomic disadvantages could have damaging effects on Hispanics' health and longevity patterns in the coming decades.

Aggressive policies are needed to deal with the substantial disadvantages in educational attainment, income, and wealth experienced by these sizable segments of the U.S. population. Such socioeconomic policies will also act as health policies: more socioeconomic empowerment will give individuals more access to care and better tools to make health-related decisions.³⁸ Although we have focused on Hispanics, this issue is germane to all socioeconomically disadvantaged groups. But since Hispanics will constitute such a large percentage of our aging population, their status will disproportionately influence the future. Currently, it is clear that Hispanic mortality advantages relative to other

groups erode when comparing the immigrant generation to subsequent generations.³⁹ Socioeconomic disadvantages among U.S.-born Hispanics may play an important role in these generational changes in mortality patterns. Given the well-established and strengthening relationship between socioeconomic status and health in the United States, Hispanic health and longevity patterns may soon lag behind those of whites if aggressive efforts are not undertaken to enhance socioeconomic achievement for all disadvantaged groups. Policy efforts must focus on making advanced education (and higher-quality education at all levels) much more attainable for socially disadvantaged groups; early-educational interventions may also be particularly important and fruitful for children who have Spanish-speaking immigrant parents. Income policies – minimum wage, child care, paid family leave, housing subsidies, and more – can also work to improve the socioeconomic status of families who are dependent upon low-wage service work. There is little doubt that future Hispanic health and longevity patterns will be influenced by how policy-makers help shape the social and economic future of America's socioeconomically disadvantaged populations.

While current longevity patterns for Hispanics relative to whites are favorable, old-age functioning and disability patterns for Hispanics compare unfavorably. Patterns for some morbidity conditions – most notably diabetes and metabolic issues – place Hispanics at higher risk than other U.S. racial/ethnic groups. Future Hispanic health and longevity patterns are troubling for a number of reasons: the unresolved legal status of over 8 million unauthorized immigrants, continued low levels of Hispanic insurance coverage even after health care reform, some unfavorable trends in

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Hispanic health behavior, and continued, substantial socioeconomic disadvantages for Hispanics relative to whites. While these risks and vulnerabilities are shared with other groups as well, development

of policies to address these issues will be of particular value to the large and growing elderly Hispanic population, and by extension, the U.S. elderly population in general.

ENDNOTES

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Authors' Note: Funding was provided by the MacArthur Foundation Research Network on an Aging Society (John W. Rowe, Chair), and by infrastructural research support (5 R24 HD042849) from the Eunice Kennedy Shriver National Institute of Child Health and Human Development to the Population Research Center at the University of Texas at Austin.

- 1 Karen R. Humes, Nicholas A. Jones, and Roberto R. Ramirez, *Overview of Race and Hispanic Origin: 2010* (Washington, D.C.: U.S. Census Bureau, 2011).
- 2 U.S. Census Bureau, "Table 6. Percent of the Population by Race and Hispanic Origin for the United States: 2015 to 2060," *2012 National Population Projections* (Washington, D.C.: U.S. Census Bureau, Population Division, 2012), <https://www.census.gov/population/projections/data/national/2012.html>.
- 3 Jennifer M. Ortman, Victoria A. Velkoff, and Howard Hogan, *An Aging Nation: The Older Population in the United States* (Washington, D.C.: U.S. Census Bureau, 2014).
- 4 Kyriakos S. Markides and Jeanne Coreil, "The Health of Southwestern Hispanics: An Epidemiologic Paradox," *Public Health Reports* 101 (1986): 253–265; and Kyriakos S. Markides and Karl Eschbach, "Hispanic Paradox in Adult Mortality in the United States," in *International Handbook of Adult Mortality*, ed. Richard G. Rogers and Eileen M. Crimmins (New York: Springer, 2011), 227–240.
- 5 Elizabeth Arias, "United States Life Tables by Hispanic Origin," *Vital and Health Statistics Series 2, No. 152* (Hyattsville, Md.: National Center for Health Statistics, 2010), 1–35; Irma T. Elo, Cassio M. Turra, Bert Kestenbaum, and B. Renee Ferguson, "Mortality Among Elderly Hispanics in the United States: Past Evidence and New Results," *Demography* 41 (2004): 109–128; Joseph T. Lariscy, Robert A. Hummer, and Mark D. Hayward, "Hispanic Older Adult Mortality in the United States: New Estimates and An Assessment of Factors Shaping the Hispanic Paradox," *Demography* 52 (1) (2015).
- 6 Lariscy, Hummer, and Hayward, "Hispanic Older Adult Mortality in the United States."

- 7 Andrew Fenelon, "Revisiting the Hispanic Mortality Advantage in the United States: The Role of Smoking," *Social Science and Medicine* 82 (2013): 1–9; and Gopal K. Singh and Robert A. Hiatt, "Trends and Disparities in Socioeconomic and Behavioural Characteristics, Life Expectancy, and Cause-Specific Mortality of Native-Born and Foreign-Born Populations in the United States, 1979–2003," *International Journal of Epidemiology* 35 (2006): 903–919.
- 8 Robert A. Hummer, Richard G. Rogers, Sarit H. Amir, Douglas Forbes, and W. Parker Frisbie, "Adult Mortality Differentials among Hispanic Subgroups and Non-Hispanic Whites," *Social Science Quarterly* 81 (2000): 459–476.
- 9 Fenelon, "Revisiting the Hispanic Mortality Advantage in the United States"; and Markides and Eschbach, "Hispanic Paradox in Adult Mortality in the United States."
- 10 Karl S. Eschbach, Soham Al-Snih, Kyriakos S. Markides, and James S. Goodwin, "Disability and Active Life Expectancy of Older U.S.- and Foreign-Born Mexican Americans," in *The Health of Aging Hispanics*, ed. Jacqueline L. Angel and Keith E. Whitfield (New York: Springer, 2007): 40–49; and Mark D. Hayward, Robert A. Hummer, Chi-Tsun Chiu, César González-González, and Rebeca Wong, "Does the Hispanic Paradox in U.S. Adult Mortality Extend to Disability?" *Population Research and Policy Review* 33 (2014): 81–96.
- 11 Steven A. Haas, Patrick M. Krueger, and Leah Rohlfson, "Race/Ethnic and Nativity Disparities in Later Life Physical Performance: The Role of Health and Socioeconomic Status Over the Life Course," *The Journals of Gerontology: Psychological Sciences & Social Sciences* 67 (2012): 238–248.
- 12 Eileen M. Crimmins, Jung Ki Kim, Dawn E. Alley, Arun Karlamangia, and Teresa Seeman, "Hispanic Paradox in Biological Risk Profiles," *American Journal of Public Health* 97 (2007): 1305–1310; and Gopal K. Singh and Mohammad Siahpush, "Ethnic-Immigrant Differentials in Health Behaviors, Morbidity, and Cause-Specific Mortality in the United States: An Analysis of Two National Data Bases," *Human Biology* 74 (2002): 83–109. For statistics on hypertension, see Crimmins et al., "Hispanic Paradox in Biological Risk Profiles"; and Zhenmei Zhang, Mark D. Hayward, and Chuntian Lu, "Is There a Hispanic Epidemiologic Paradox in Later Life? A Closer Look at Chronic Morbidity," *Research on Aging* 34 (2012): 548–571.
- 13 Crimmins et al., "Hispanic Paradox in Biological Risk Profiles."
- 14 Zhang et al., "Is There a Hispanic Epidemiologic Paradox in Later Life?"
- 15 Lariscy, Hummer, and Hayward, "Hispanic Older Adult Mortality in the United States."
- 16 Jeffrey S. Passel and D'Vera Cohn, *A Portrait of Unauthorized Immigrants in the United States* (Washington, D.C.: Pew Hispanic Center, 2009).
- 17 Douglas S. Massey, "America's Immigration Policy Fiasco: Learning from Past Mistakes," *Dædalus* 142 (3) (Summer 2013): 5–15.
- 18 Passell and Cohn, "A Portrait of Unauthorized Immigrants to the United States."
- 19 Massey, "America's Immigration Policy Fiasco."
- 20 Steven P. Wallace, Jacqueline Torres, Tabahir Sadegh-Nobari, Nadereh Pourat, and E. Richard Brown, "Undocumented Immigrants and Health Care Reform," Final Report to The Commonwealth Fund, UCLA Center for Health Policy Research, 2012.
- 21 Ibid.; and Marc L. Berk, Claudia L. Schur, Leo R. Chavez, and Martin Frankel, "Health Care Use Among Undocumented Latino Immigrants," *Health Affairs* 19 (2000): 44–57.
- 22 Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica C. Smith, "Income, Poverty, and Health Insurance Coverage in the United States: 2012," *Current Population Reports* P60-245 (Washington, D.C.: U.S. Census Bureau, 2013), 1–77.
- 23 Jenna Levy, "U.S. Uninsured Rate Drops to 13.4%," Gallup, 2014, <http://www.gallup.com/poll/168821/uninsured-rate-drops.aspx> (accessed September 4, 2014).

- ²⁴ Henry J. Kaiser Family Foundation, "Health Coverage for the Hispanic Population Today and Under the Affordable Care Act," *Kaiser Commission of Medicaid and the Uninsured: Key Facts* (Washington, D.C.: Kaiser Family Foundation, 2013): 1–6, <http://www.kff.org/kcmu>.
- ²⁵ Samuel H. Preston, Andrew Stokes, Neil K. Mehta, and Bochen Cao, "Projecting the Effect of Changes in Smoking and Obesity on Future Life Expectancy in the United States," *Demography* 51 (2014): 27–49.
- ²⁶ Juan A. Rivera, Simon Barquera, Teresa González-Cossío, Gustavo Olaiz, and Jaime Sepulveda, "Nutrition Transition in Mexico and in Other Latin American Countries," *Nutrition Reviews* 62 (2004): S149–S157.
- ²⁷ Katherine M. Flegal, Margaret D. Carroll, Brian K. Kit, and Cynthia L. Ogden, "Prevalence of Obesity and Trends in the Distribution of Body Mass Index among U.S. Adults, 1999–2010," *JAMA: The Journal of the American Medical Association* 307 (2012): 491–497.
- ²⁸ Preston, Stokes, Mehta, and Cao, "Projecting the Effect of Changes in Smoking and Obesity on Future Life Expectancy in the United States."
- ²⁹ Andrew Fenelon, "Revisiting the Hispanic Mortality Advantage in the United States: The Role of Smoking," *Social Science and Medicine* 82 (2013): 1–9; and Lariscy, Hummer, and Hayward, "Hispanic Older Adult Mortality in the United States."
- ³⁰ Centers for Disease Control and Prevention, "Lung Cancer Rates by Race and Ethnicity," <http://www.cdc.gov/cancer/lung/statistics/race.htm>.
- ³¹ American Lung Association Research and Program Service (Epidemiology and Statistics Unit), "Trends in Tobacco Use," 2011, <http://www.lung.org/finding-cures/our-research/trend-reports/Tobacco-Trend-Report.pdf>
- ³² Lariscy, Hummer, and Hayward, "Hispanic Older Adult Mortality in the United States."
- ³³ Bruce G. Link and Jo Phelan, "Social Conditions as Fundamental Causes of Disease," *Journal of Health and Social Behavior* 36 (extra issue) (1995): 80–94; and Jo C. Phelan, Bruce G. Link, and Parisa Tehranifar, "Social Conditions as Fundamental Causes of Health Inequalities: Theory, Evidence, and Policy Implications," *Journal of Health and Social Behavior* 51 (extra issue) (2010): S28–S40.
- ³⁴ S. Jay Olshansky, Toni Antonucci, Lisa Berkman, Robert H. Binstock, Axel Boersch-Supan, John T. Cacioppo, Bruce A. Carnes, Laura L. Carstensen, Linda P. Fried, Dana P. Goldman, James Jackson, Martin Kohli, John Rother, Yuhui Zheng, and John Rowe, "Differences in Life Expectancy Due to Race and Educational Differences Are Widening, and Many May Not Catch Up," *Health Affairs* 31 (8) (2012): 1803–1813.
- ³⁵ Marta Tienda and Faith Mitchell, eds., *Multiple Origins, Uncertain Destinies: Hispanics and the American Future* (Washington, D.C.: The National Academies Press, 2006).
- ³⁶ Rakesh Kochhar, Richard Fry, and Paul Taylor, *Wealth Gaps Rise to Record Highs Between Whites, Blacks, and Hispanics* (Washington, D.C.: Pew Research Center, 2011), http://www.pewsocialtrends.org/files/2011/07/SDT-Wealth-Report_7-26-11_FINAL.pdf.
- ³⁷ Tienda and Mitchell, *Multiple Origins, Uncertain Destinies*.
- ³⁸ Robert F. Schoeni, James S. House, George A. Kaplan, and Harold Pollack, eds., *Making Americans Healthier: Social and Economic Policy as Health Policy* (New York: Russell Sage Foundation, 2008).
- ³⁹ Lariscy, Hummer, and Hayward, "Hispanic Older Adult Mortality in the United States"; and Fernando Riosmena, Bethany G. Everett, Richard G. Rogers, and Jeff A. Dennis, "Negative Acculturation and Nothing More? Cumulative Disadvantage and Mortality during the Immigrant Adaptation Process among Latinos in the U.S.," *International Migration Review* (forthcoming 2015).