

THE WANING

HISPANIC HEALTH PARADOX



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Because many people of color are socially and economically disadvantaged, U.S. health statistics generally show a racial and ethnic gradient in health and mortality. Yet Latinos defy this expectation in important ways. Most notably, some of the more disadvantaged Latino groups—such as Mexican Americans—have substantially *lower* mortality rates than other racial and ethnic groups with similarly low socioeconomic status (SES). More strikingly, Latinos have higher life expectancies *at almost every* age relative to groups with more favorable SES, such as non-Hispanic whites. Scholars have come to label these patterns as the “Hispanic Health Paradox” (HHP), a phenomenon that is particularly prevalent among Latin American immigrants, but also exists among U.S.-born Latinos.¹ The HHP can be explained by selective forces (immigrants are especially healthy relative to those they left behind) and by social and cultural buffering within Latino communities.²

TABLE 1: Prevalence of selected indicators related to chronic health for foreign and U.S.-born Mexican Americans and U.S.-born non-Hispanic whites and African Americans, 1999–2004 and 2005–2010.

| Indicator | | Mexican American | | Non-Hispanic white | Non-Hispanic black | Mexican / NHW | | Mexican / NHB | |
|------------------------|----------------------------------------|------------------|-----------|--------------------|--------------------|---------------|-----------|---------------|-----------|
| | | Foreign-born | U.S.-born | | | Foreign-born | U.S.-born | Foreign-born | U.S.-born |
| 1999–2004 | Obesity | 33.9 | 42.2 | 33.4 | 45.2 | 1.02 | 1.27 | 0.75 | 0.93 |
| | Severe obesity | 11.3 | 17.5 | 13.2 | 23.5 | 0.86 | 1.33 | 0.48 | 0.75 |
| | High glycosylated hemoglobin | 15.0 | 19.2 | 8.3 | 17.4 | 1.82 | 2.32 | 0.86 | 1.10 |
| | High total cholesterol | 20.1 | 17.8 | 21.4 | 19.3 | 0.94 | 0.83 | 1.04 | 0.92 |
| | Low HDL cholesterol | 25.8 | 24.7 | 20.1 | 13.8 | 1.28 | 1.23 | 1.87 | 1.79 |
| | High systolic/diastolic blood pressure | 22.6 | 26.8 | 26.0 | 37.1 | 0.87 | 1.03 | 0.61 | 0.72 |
| | Current smoking | 19.7 | 21.8 | 19.3 | 29.9 | 1.02 | 1.13 | 0.66 | 0.73 |
| 2005–2010 | Obesity | 40.5 | 43.6 | 36.2 | 49.3 | 1.12 | 1.20 | 0.82 | 0.89 |
| | Severe obesity | 12.3 | 19.8 | 15.5 | 25.3 | 0.80 | 1.28 | 0.49 | 0.78 |
| | High glycosylated hemoglobin | 19.3 | 20.8 | 9.1 | 20.7 | 2.12 | 2.29 | 0.93 | 1.00 |
| | High total cholesterol | 19.4 | 16.1 | 18.1 | 14.2 | 1.07 | 0.89 | 1.36 | 1.14 |
| | Low HDL cholesterol | 25.4 | 19.3 | 18.6 | 11.6 | 1.37 | 1.04 | 2.19 | 1.67 |
| | High systolic/diastolic blood pressure | 17.9 | 23.2 | 20.2 | 31.8 | 0.88 | 1.15 | 0.56 | 0.73 |
| | Current smoking | 15.5 | 21.1 | 18.5 | 28.4 | 0.84 | 1.14 | 0.55 | 0.74 |
| 2005–2010 1999–2004 | Obesity | 1.20 | 1.03 | 1.09 | 1.09 | 1.10 | 0.95 | 1.10 | 0.95 |
| | Severe obesity | 1.09 | 1.13 | 1.18 | 1.08 | 0.93 | 0.96 | 1.01 | 1.05 |
| | High glycosylated hemoglobin | 1.28 | 1.08 | 1.10 | 1.19 | 1.16 | 0.98 | 1.08 | 0.91 |
| | High total cholesterol | 0.96 | 0.91 | 0.84 | 0.74 | 1.14 | 1.07 | 1.31 | 1.23 |
| | Low HDL cholesterol | 0.98 | 0.78 | 0.92 | 0.84 | 1.06 | 0.85 | 1.17 | 0.93 |
| | High systolic/diastolic blood pressure | 0.79 | 0.87 | 0.78 | 0.86 | 1.01 | 1.11 | 0.92 | 1.01 |
| | Current smoking | 0.79 | 0.97 | 0.96 | 0.95 | 0.82 | 1.01 | 0.83 | 1.02 |

Source: National Health and Nutrition Examination Survey, pooled 1999–2004 and 2005–2010 cycles.

The focus on the Hispanic mortality advantage distracts us from understanding the broader state of Hispanic health. The mortality advantage, which is partly generated by comparatively low rates of smoking and correspondingly better cardiovascular health, is obviously very important. That said, the benefit of a long life is diminished when it is not also a healthy life, which is often the case for Hispanics. Most notably, Hispanics have lower rates of health insurance and reduced access to steady and high-quality health care, complicating treatment by delaying detection, raising costs, and increasing the likelihood of disability. At the same time, because many Hispanics, especially undocumented immigrants, are engaged in hard manual labor, a larger share of their (longer) life spans is spent ill or disabled.

We illustrate this “mixed bag” of Hispanic health by showing that, although there are indeed some areas of Mexican-American health advantage, there are also important dimensions in which Mexican Americans are disadvantaged relative to other racial and ethnic groups. We provide this broad view by examining several indicators drawn from the National Health and Nutrition Examination Survey (NHANES).³ Because of increasing inequality, and because of important changes in the composi-

tion of the (foreign-born) Mexican population, we also present changes over time.

The key quantitative backdrop to our analyses is presented in Table 1. Here, we summarize the prevalence of several health outcomes that are markers of cardiovascular and cardiometabolic conditions, including heart attacks and disease, strokes, and diabetes. While we present some graphic representations of prevalence in the figures below, Table 1 provides the prevalence estimates in detail. To illustrate the differences among racial and ethnic groups, Table 1 also shows the ratios between foreign- and U.S.-born Mexicans compared with non-Hispanic whites and African Americans respectively (in the two rightmost columns). To illustrate changes in health in each group throughout the last decade, we further show the ratio of our estimates for each group in 2005–2010 relative to the same value in 1999–2004 (in the lower panel).

The Mixed Bag of Obesity and Diabetes

We begin by considering the prevalence of overall and severe obesity (see Figure 1).⁴ We concern ourselves with obesity because it as an important risk factor for cardiometabolic and

cardiovascular health conditions that are responsible for several major causes of death. Some of the patterns in Figure 1 conform to the stock HHP story, such as lower levels of obesity and severe obesity among Mexican Americans relative to African Americans during both periods. However, the data suggest not only a sizable obesity disadvantage for U.S.-born Mexicans relative to non-Hispanic whites, but also a growing disadvantage among Mexican immigrants relative to non-Hispanic whites between 1999–2004 and 2005–2010.

There are many indications that this slight but growing immigrant disadvantage in milder forms of obesity and some related chronic health conditions may worsen in the future. Mexico has experienced a rapid “nutrition transition,” a transformation of eating and cooking habits, and economic and physical activity patterns, resulting in higher net calorie consumption and major weight gain.⁵ Because adult obesity rates are now as high in Mexico as they are in the United States, it follows that future Mexican immigrant cohorts may continue to exhibit obesity rates close to those observed in the United States.

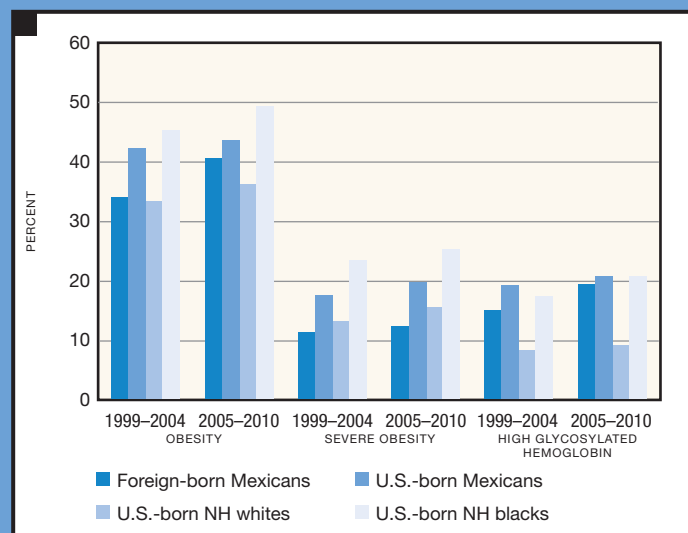
This suggests that we should expect ongoing increases in obesity and declines in overall health among immigrants. Further, immigrants tend to change their eating behaviors, gain unhealthy amounts of weight, and experience worsening health as they continue to live in the United States.⁶ This tendency for health to worsen with time spent in the United States is especially troubling because there are forces at work increasing the time spent in the United States. That is, because of changing economic and enforcement dynamics, the Mexican immigrant population remains in the United States longer, on average, than at the turn of the 21st century. This in turn results in higher obesity rates as well as other declines in health at the population level.

One silver lining for Mexican Americans, despite these challenges, is that their levels of severe obesity are lower and have grown more slowly than those of whites. Increases in more severe forms of obesity were highest among non-Hispanic whites, followed by U.S.-born Mexican Americans, Mexican immigrants, and African Americans.

We turn next to type 2 diabetes. Complications from poorly controlling diabetes are an important cause of death, indeed particularly in Mexican and other Latin American-origin populations. We examine the extent of differentials in diabetes prevalence via levels of glycosylated hemoglobin, a proxy for poorly controlled type 2 diabetes.

Figure 1 clearly shows that diabetes incidence is an important aspect of *disadvantage* among Mexican Americans. Even though Mexican immigrants have comparable levels of obesity and lower levels of severe obesity, they have higher levels of glycosylated hemoglobin than non-Hispanic whites. To be sure, the Mexican-origin population had slightly lower levels of poorly controlled diabetes than African Americans in 2005–2010. But the trend is worrying: As with the case of obesity, Mexican immigrants had disproportionately higher growth in diabetes levels between 1999–2004 and 2005–2010, putting foreign-born Mexicans at a higher disadvantage relative to non-Hispanic whites in the latter period.

FIGURE 1. Prevalence of obesity, severe obesity, and high glycosylated hemoglobin for selected race/ethnicity/nativity groups in the United States, 1999–2004 and 2005–2010.



Source: Authors' calculations using 1999–2010 pooled National Health and Nutrition Examination Surveys.

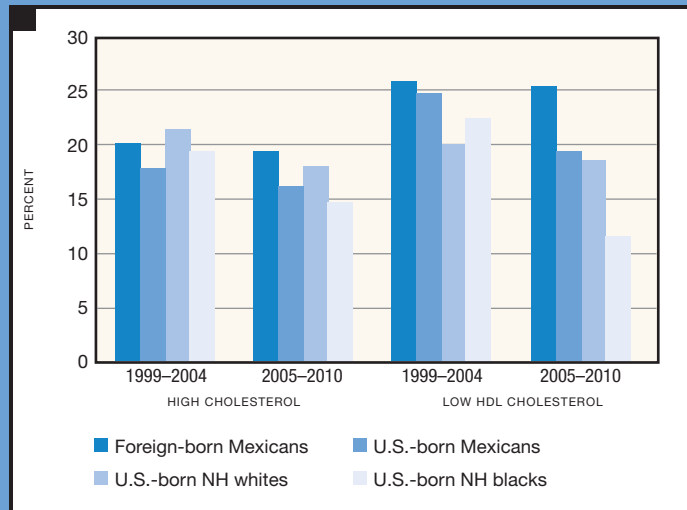
The worsening of conditions in Mexico and the lengthening of U.S. stays among Mexican immigrants may explain these results. If so, it bodes ill for the future, given that both of these sources are likely to remain in play. There is, moreover, yet another troubling factor: Latinos, particularly immigrants, have poor access to health care, which can result in less awareness of conditions like diabetes and reduce adherence to and follow-up on recommended treatments. Late detection related to lack of awareness and adherence to treatment can cause severe health complications, increase costs in the health care system, and take a nontrivial human toll.

The Mixed Bag of Factors Leading to Heart Disease and Stroke

One of course should also care deeply about heart disease and stroke because both are major chronic diseases and causes of death. It is accordingly important to examine the sources of the Hispanic advantage in cardiovascular mortality and to inquire if it is supported by different biomarkers of cardiovascular health. To do so, we examine total levels of cholesterol, a rough indicator of the amount of low-density lipoprotein (LDL) cholesterol, the main type of buildup that leads to artery blockage and cardiovascular disease. Because another type of cholesterol—high-density lipoprotein (HDL) cholesterol—helps remove some of this blockage, *low* HDL levels are considered risky. We therefore examine HDL levels as well.

As shown in Table 1 and as illustrated in Figure 2, non-Hispanic whites and Mexican immigrants have higher levels of total cholesterol than U.S.-born Mexican Americans and, especially, African Americans. This is a mixed-bag story insofar as Mexican

FIGURE 2. Prevalence of risky levels of cholesterol and high-density lipoprotein (hdl) cholesterol for selected race/ethnicity/nativity groups in the United States, 1999–2004 and 2005–2010.

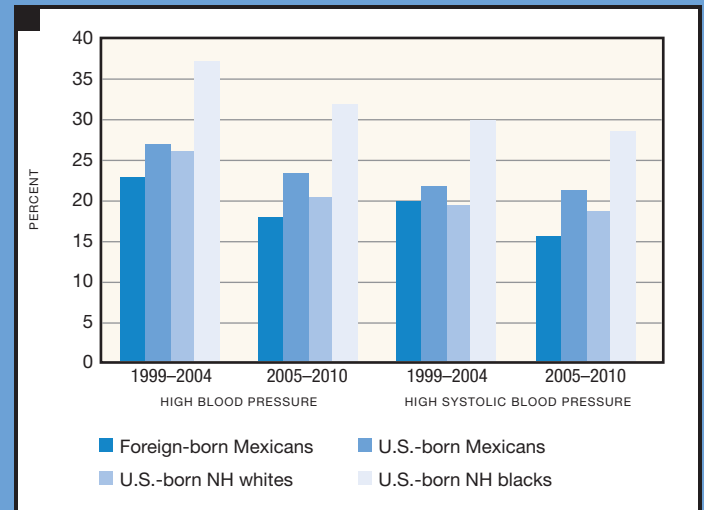


Source: Weighted estimates using 1999–2010 pooled National Health and Nutrition Examination Surveys.

immigrants are doing poorly—especially in 2005–2009—whereas U.S.-born Mexican Americans (and African Americans) are doing comparatively well. There is, by contrast, absolutely no evidence of a paradox with respect to HDL cholesterol. In this case, both immigrants and U.S.-born Mexican Americans have riskier HDL levels than whites and African Americans. Moreover, although risky levels of total and HDL cholesterol *decreased* for all groups between 1999–2004 and 2005–2009, they decreased only very slightly for Mexican immigrants, suggesting again that the health status of the average foreign-born Mexican deteriorated over the last decade.

Despite the preceding challenges to conventional wisdom, other indicators of chronic health are indeed more favorable among Mexican Americans than among both whites and African Americans, just as the strong-form HHP would have it. As shown in Figure 3, Mexican immigrants have comparatively low levels of hypertension,⁷ an important risk factor for heart disease and stroke, whereas U.S.-born Mexican Americans have slightly lower or comparable levels to those of whites, and African Americans have the highest levels of risk associated with blood pressure. Even though these conditions for the most part *improved* (i.e., declined) between 1999–2004 and 2005–2010, they did so at a slightly lower pace for Mexican immigrants relative to non-Hispanic whites, suggesting a slight reduction of the HHP, similar to other outcomes in which the Mexican immigrant disadvantage increased. At the same time, note that smoking did decrease more rapidly among Mexican immigrants over the prior decade, resulting in a clearer HHP with respect to this risk factor (see Table 1 for results on smoking).

FIGURE 3. Prevalence of high blood pressure and smoking status for selected race/ethnicity/nativity groups in the United States, 1999–2004 and 2005–2010.



Source: Weighted estimates using 1999–2010 pooled National Health and Nutrition Examination Surveys.

Conclusions

A broad examination of different dimensions of chronic health and its major risk factors provides a more mixed picture of Hispanic health than is apparent from an examination of mortality or specific chronic health outcomes alone. Even though Mexican Americans live longer than expected given their low SES, they spend a higher share of their lives in more fragile and unhealthy states than non-Hispanic whites.

Recent socioeconomic and epidemiological trends also question the continued relevance of the HHP in characterizing Hispanic health. Although Mexican immigrants and U.S.-born Mexican Americans still exhibit better than “expected” health in some dimensions, particularly relative to African Americans, it is notable that immigrant health either worsened more quickly or improved more slowly than that of non-Hispanic whites and, to a lesser extent, African Americans. While it may be too early to conclude that all good things, including the HHP, must ultimately come to an end, there are surely signs that the HHP is under threat.

The key question, when it comes to the future of the “Hispanic Health Paradox,” is whether Mexican Americans will continue to live longer than expected despite spending their lives in more fragile and unhealthy states than non-Hispanic whites.⁸ Because we’re seeing troubling results for some chronic diseases and risk factors, one has to worry that it may ultimately translate into less favorable mortality rates as well.⁹ ■

Endnotes

1. For example, Hummer, Robert A., Richard G. Rogers, Charles B. Nam, and Felicia B. LeClere. 1999. "Race/Ethnicity, Nativity, and U.S. Adult Mortality." *Social Science Quarterly*, 80(1), 136–153.

2. For further reading, see Riosmena, Fernando, Rebecca Wong, and Alberto Palloni. 2013. "Migration Selection, Protection, and Acculturation in Health: A Bi-National Perspective on Older Adults." *Demography*, 50, 1039–1064.

3. The NHANES is a nationally representative data source that takes several types of physical measurements, including blood samples. These kinds of indicators are preferred over those derived from self-reported (diagnosis) data that is more commonly available in national surveys. We present figures for adults between the ages of 40 and 74, as it is roughly after age 40 that chronic health conditions manifest among most people. We restrict our analyses to people younger than 75 to avoid the possibility that mortality selection affects our assessments. To show changes in racial, ethnic, and nativity differentials over the previous decade, we present data from two different periods, 1999–2004 and 2005–2010.

4. Following conventional procedures, we classify people as obese and severely obese if they have body mass index levels (a measure of "weight-for-height") of more than 30 kg/m² and 35 kg/m², respectively.

5. See Popkin, Barry M., and Penny Gordon-Larsen. 2004. "The Nutrition Transition: Worldwide Obesity Dynamics and Their Determinants." *International Journal of Obesity*, 28, S2–S9.

6. Akresh, Ilana Redstone. 2007. "Dietary Assimilation and Health among Hispanic Immigrants to the United States." *Journal of Health and Social Behavior*, 48(4), 404–417; Antecol, Heather, and Kelly Bedard. 2006. "Unhealthy Assimilation: Why Do Immigrants Converge to American Health Status Levels?" *Demography*, 43(2), 337–360.

7. High blood pressure consistent with hypertension is indicated by high levels of systolic or diastolic blood pressure. Systolic refers to the amount of blood the heart forces while pumping, while diastolic refers to a baseline level of blood pressure between heart beats. High-risk levels of systolic pressure are those above 140 mm/Hg, while high-risk levels of diastolic blood pressure are those of 90 mm/Hg or higher (see <http://www.nhlbi.nih.gov/health/health-topics/topics/hbp/>).

As customary in the literature, we classified people as having high blood pressure when either of these thresholds had been surpassed using an average of up to three blood pressure measurements in the NHANES.

8. See Beard, Holly A., Majd Al Ghatrif, Rafael Samper-Ternent, Kerstin Gerst, and Kyriakos S. Markides. 2009. "Trends in Diabetes Prevalence and Diabetes-Related Complications in Older Mexican Americans from 1993–1994 to 2004–2005." *Diabetes Care*, 32(12), 2212–2217; Markides, Kyriakos, and Kerstin Gerst. 2011. "Immigration, Aging, and Health in the United States," in *Handbook of the Sociology of Aging*, edited by J. L. Angel and R. A. Settersten, Jr. New York: Springer.

9. Hummer, Robert A., and Mark D. Hayward. Forthcoming. "Hispanic Older Adult Health and Longevity in the United States: Current Patterns and Concerns for the Future." *Daedalus*.

Further Reading

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