It is a great paradox that such a wealthy, developed nation as the United States performs so poorly when it comes to health. Research shows that some who immigrate to the United States from much poorer nations experience a decline in their health that worsens the longer they remain. Is American culture to blame?

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Mexican Americans come to the United States with health as good as whites and Asians—and much better than whites and Asians at equivalent socioeconomic status—and within a few years become much worse,” says adjunct professor of maternal and child health Julia Walsh, M.D., D.T.P.H. “The longer they are here, the more they approximate the health of African Americans, who have the poorest health. We seem to generate health disparities that did not exist previously.”

Rates of preterm births—one way of measuring a population’s health—have been rising steadily for 20 years. “All efforts at improving prenatal care and all efforts at improving childbirth, have not had much effect,” says Walsh. “We see every year a little bit of an increase in the rates of both preterm delivery and low birth weight.” At the same time, says Walsh, infant mortality rates in the United States are higher than in any other developed nation. “We rank down around twenty-eighth in our infant and child mortality. We’re down around Slovenia. Places like Costa Rica rank higher than we do. And we are so much richer; why are we unable to improve these outcomes?”

The Impact of Acculturation

Walsh and Marc B. Schenker, M.D., M.P.H., professor and chair of public health sciences at UC Davis School of Medicine, led a study of 1,200 Latinas at varying levels of acculturation who were receiving prenatal care at San Joaquin General Hospital clinics in Stockton, California. Acculturation is measured by a series of questions based primarily on a person’s language use—whether she primarily speaks Spanish, reads Spanish, writes in Spanish, watches Spanish television, socializes with friends in Spanish, or does all those things in English.

Walsh and Schenker hypothesized that poor birth outcomes in more acculturated Latinas might be due to poor nutrition; smoking; drinking and drug use; urogenital infections; psychosocial factors; occupational exposures; poor

Trailblazer

In discussions with social epidemiologists about health inequities, one name is mentioned repeatedly: Nancy Krieger, Ph.D. ’89. Credited with shaking up public health through her incisive theoretical papers and solid research, Krieger has made the study of social class, race, and health her life’s work for the past 20 years. When much of the study of health had been focused on individuals and single diseases, Krieger exhorted people to examine how the broader social and economic forces play causal roles in health outcomes, and challenged them to join her in taking on the real determinants of health such as historical oppression and social status.

Krieger has been concerned with the measurement and monitoring of social inequalities in health. One of her most notable projects is the Public Health Disparities Geocoding Project, which links census data with health information for communities. The project has demonstrated that neighborhood economic status corresponds with the health of the community, and shows the ties between poverty and negative health outcomes. The project has also helped public health officials identify areas for intervention, and given them a way to measure the impact of economic and health policies.

She is perhaps best known for developing theoretical frameworks for understanding the social forces that determine health. “Epidemiology and the Web of Causation: Has Anyone Seen the Spider?,” an article which appeared in Social Science and Medicine in 1994, is cited reverently by people in the field as a groundbreaking approach to the understanding of societal forces and disease. In the paper she argues that any study of health must examine the historical and social contexts that interact intimately with our biological development and responses. Any attempt to understand the causes of disease that focuses narrowly on a web of risk factors, she asserts, will fail to locate the “spider,” the broader context that impacts health outcomes.

After receiving her Ph.D. from UC Berkeley in 1989, Krieger went on to become an investigator at the Kaiser Foundation Research Institute and joined the faculty at the Harvard School of Public Health in 1995. She currently holds the positions of professor of society, human development, and health, and associate director of the Harvard Center for Society and Health at the Harvard School of Public Health. 

— Kelly Mills
access to care; and socioeconomic factors. However, identifying any single factor as the main culprit proved challenging.

“What happens when they come here is that nutrition worsens,” says Walsh. “They change from a traditional diet of beans and greens and rice and corn to one that is fast food, highly processed, low in nutrients, low in some of the micronutrients, and very high in fat—but you’d have to be very vitamin deficient to affect birth outcomes. Then the rates in smoking among the women who first come to the United States from Mexico are practically nonexistent, and they go up about four times, but only to about 14 percent. Alcohol ingestion also increases, and the use of drugs, but again, very slightly. It would not account for this deterioration in birth weight.

“As for environmental exposures, it seems that pesticide exposure decreases the longer you are in the United States, because people tend to move from the farm into service occupations. Reproductive tract infection was the another factor we looked at, and we were also able to document that, unquestionably, rates of sexually transmitted diseases increase, and the age when young women have their first intercourse decreases the more acculturated they are.”

Walsh also looked at stress and social support. “Pregnancy anxiety or pregnancy stress—worry about the child—increases, and social support declines. There are many more single mothers after they’ve been here for a while and become more acculturated.” Ultimately, says Walsh, with the sample size of 1,200, it was difficult to disaggregate which of the many strong behavioral changes associated with poor birth outcomes was the greatest contributor. She plans to increase the number of pregnant women in future studies.

Quality of Care Plays a Role
Sylvia Guendelman, Ph.D., M.S.W., has also examined birth outcomes among Mexican American women and the effects of acculturation. More recently she has been looking at the differences in obstetric complications experienced by women of different races and ethnicities. Working with Dorothy Thornton, Ph.D., Jeffrey Gould, M.D., M.P.H., and Nap Hosang, M.D., M.P.H., M.B.A., she compared maternal morbidities during labor and delivery among white, African American, Asian, and Latina women.

“We were interested in determining basically two things: first, which among the ethnic groups in California are more likely to experience obstetric complications, and second, which are the groups that are more likely to experience complications that are sensitive to the poor quality of obstetric care,” says Guendelman. The study used postpartum hemorrhage, major puerperal infections, and major lacerations as complications that indicated the quality of care received.

Guendelman and colleagues found that approximately one in five deliveries resulted in an obstetric complication. African American women experienced a disproportionate number of complications, while Asian and Latina women experienced fewer total complications compared to white women. The favorable overall outcome for Latina mothers is consistent with the better birth outcomes found in this population. However, all women of color showed a greater risk of puerperal infections—suggesting exposure to poor quality of obstetric care.

“When it comes to complications that are directly linked to the quality of care, all minority women are at greater risk of suffering these types of complications compared to white women,” says Guendelman.

Applying the Findings
Walsh is optimistic that if answers can be found to explain the rapid deterioration in birth outcomes among Latino immigrant populations, this knowledge can be used to design interventions to improve birth outcomes in other racial and ethnic groups in the United States.

“We want to understand why rates of low birth weight in the United States are so terrible, particularly among African Americans,” she says. “If you look at long-term follow-up of Hispanic children, they go from being unacculturated and among the most healthy to being acculturated and very nearly among the most unhealthy—and this happens over a relatively short period of time. By the time they get to school, they have higher rates of asthma and obesity, poor school performance, much worse school readiness, and then they have illness and absenteeism during school, and they also tend to drop out of school more.

“If you can figure out what’s happening and what are the major behaviors associated with it, you can help identify interventions that might be worthwhile in turning around all of those who have very poor health.”