U.S. Health in International Perspective: Shorter Lives, Poorer Health

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Summary

The United States is among the wealthiest nations in the world, but it is far from the healthiest. Although life expectancy and survival rates in the United States have improved dramatically over the past century, Americans live shorter lives and experience more injuries and illnesses than people in other high-income countries. A growing body of research is calling attention to this problem, with a 2011 report by the National Research Council confirming a large and rising international “mortality gap” among adults age 50 and older. The U.S. health disadvantage cannot be attributed solely to the adverse health status of racial or ethnic minorities or poor people, because recent studies suggest that even highly advantaged Americans may be in worse health than their counterparts in other countries.

As a follow-up to the 2011 National Research Council report and in light of this new evidence, the National Institutes of Health asked the National Research Council (NRC) and the Institute of Medicine (IOM) to convene a panel of experts to study this issue. The Panel on Understanding Cross-National Health Differences Among High-Income Countries was charged with examining whether the U.S. health disadvantage exists across the life span, exploring potential explanations, and assessing the larger implications of the findings.

THE INFERIOR HEALTH STATUS OF THE UNITED STATES

The panel’s analysis compared health outcomes in the United States with those of 16 comparable high-income or “peer” countries: Australia, Austria, Canada, Denmark, Finland, France, Germany, Italy, Japan,
Norway, Portugal, Spain, Sweden, Switzerland, the Netherlands, and the United Kingdom. We examined historical trends dating back several decades, with a focus on the more extensive data available from the late 1990s to 2008.

Over this time period, we uncovered a strikingly consistent and pervasive pattern of higher mortality and inferior health in the United States, beginning at birth:

- For many years, Americans have had a shorter life expectancy than people in almost all of the peer countries. For example, as of 2007, U.S. males lived 3.7 fewer years than Swiss males and U.S. females lived 5.2 fewer years than Japanese females.
- For the past three decades, this difference in life expectancy has been growing, especially among women.
- The health disadvantage is pervasive—it affects all age groups up to age 75 and is observed for multiple diseases, biological and behavioral risk factors, and injuries.

More specifically, when compared with the average for peer countries, the United States fares worse in nine health domains:

1. **Adverse birth outcomes**: For decades, the United States has experienced the highest infant mortality rate of high-income countries and also ranks poorly on other birth outcomes, such as low birth weight. American children are less likely to live to age 5 than children in other high-income countries.
2. **Injuries and homicides**: Deaths from motor vehicle crashes, non-transportation-related injuries, and violence occur at much higher rates in the United States than in other countries and are a leading cause of death in children, adolescents, and young adults. Since the 1950s, U.S. adolescents and young adults have died at higher rates from traffic accidents and homicide than their counterparts in other countries.
3. **Adolescent pregnancy and sexually transmitted infections**: Since the 1990s, among high-income countries, U.S. adolescents have had the highest rate of pregnancies and are more likely to acquire sexually transmitted infections.
4. **HIV and AIDS**: The United States has the second highest prevalence of HIV infection among the 17 peer countries and the highest incidence of AIDS.
5. **Drug-related mortality**: Americans lose more years of life to alcohol and other drugs than people in peer countries, even when deaths from drunk driving are excluded.
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6. **Obesity and diabetes:** For decades, the United States has had the highest obesity rate among high-income countries. High prevalence rates for obesity are seen in U.S. children and in every age group thereafter. From age 20 onward, U.S. adults have among the highest prevalence rates of diabetes (and high plasma glucose levels) among peer countries.

7. **Heart disease:** The U.S. death rate from ischemic heart disease is the second highest among the 17 peer countries. Americans reach age 50 with a less favorable cardiovascular risk profile than their peers in Europe, and adults over age 50 are more likely to develop and die from cardiovascular disease than are older adults in other high-income countries.

8. **Chronic lung disease:** Lung disease is more prevalent and associated with higher mortality in the United States than in the United Kingdom and other European countries.

9. **Disability:** Older U.S. adults report a higher prevalence of arthritis and activity limitations than their counterparts in the United Kingdom, other European countries, and Japan.

The first half of the above list occurs disproportionately among young Americans. Deaths that occur before age 50 are responsible for about two-thirds of the difference in life expectancy between males in the United States and peer countries, and about one-third of the difference for females. And the problem has been worsening over time; since 1980, the United States has had the first or second lowest probability of surviving to age 50 among the 17 peer countries. Americans who do reach age 50 generally arrive at this age in poorer health than their counterparts in other high-income countries, and as older adults they face greater morbidity and mortality from chronic diseases that arise from risk factors (e.g., smoking, obesity, diabetes) that are often established earlier in life.

The U.S. health disadvantage is more pronounced among socioeconomically disadvantaged groups, but even advantaged Americans appear to fare worse than their counterparts in England and some other countries. That is, Americans with healthy behaviors or those who are white, insured, college-educated, or in upper-income groups appear to be in worse health than similar groups in comparison countries.

Certain factors do not appear to be responsible for the U.S. health disadvantage. The United States has higher survival after age 75 than do peer countries, and it has higher rates of cancer screening and survival, better control of blood pressure and cholesterol levels, lower stroke mortality, lower rates of current smoking, and higher average household income. In addition, U.S. suicide rates do not exceed the international average. Finally, the nation’s large population of recent immigrants is generally in better health than native-born Americans.
With these important exceptions, Americans under age 75 fare poorly among peer countries on most measures of health. This health disadvantage is particularly striking given the wealth and assets of the United States and the country’s enormous level of per capita spending on health care, which far exceeds that of any other country.

POSSIBLE EXPLANATIONS FOR THE U.S. HEALTH DISADVANTAGE

The panel’s search for potential explanations revealed that important antecedents of good health—such as the quality of health care and the prevalence of health-related behaviors—are also frequently problematic in the United States. For example, the U.S. health system is highly fragmented, with limited public health and primary care resources and a large uninsured population. Compared with people in other countries, Americans are more likely to find care inaccessible or unaffordable and to report lapses in the quality and safety of care outside of hospitals.

In terms of individual behaviors, Americans are less likely to smoke and may drink less heavily than their counterparts in peer countries, but they consume the most calories per capita, abuse more prescription and illicit drugs, are less likely to fasten seatbelts, have more traffic accidents involving alcohol, and own more firearms than their peers in other countries. U.S. adolescents seem to become sexually active at an earlier age, have more sexual partners, and are less likely to practice safe sex than adolescents in other high-income countries.

Adverse social and economic conditions also matter greatly to health and affect a large segment of the U.S. population. Despite its large and powerful economy, the United States has higher rates of poverty and income inequality than most high-income countries. U.S. children are more likely than children in peer countries to grow up in poverty, and the proportion of today’s children who will improve their socioeconomic position and earn more than their parents is smaller than in many other high-income countries. In addition, although the United States was once the world leader in education, students in many countries now outperform U.S. students. Finally, Americans have less access to the kinds of “safety net” programs that help buffer the effects of adverse economic and social conditions in other countries.

Although all of these differences are compelling and important, no single factor fully explains the U.S. health disadvantage, for example:

• Problems with the health care system might exacerbate illnesses and heighten mortality from certain diseases but cannot account for transportation-related accidents or violence.
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- Individual behaviors may contribute to the overall disadvantage, but studies show that even Americans with healthy behaviors, for example, those who are not obese or do not smoke, appear to have higher disease rates than their peers in other countries.
- The problem is not confined to socially or economically disadvantaged Americans; as noted above, several recent studies have suggested that even Americans with high socioeconomic status may experience poorer health than their counterparts in peer countries.

Many conditions that might explain the U.S. health disadvantage—from individual behaviors to systems of care—are also influenced by the physical and social environment in U.S. communities. For example, built environments that are designed for automobiles rather than pedestrians discourage physical activity. Patterns of food consumption are also shaped by environmental factors, such as actions by the agricultural and food industries, grocery store and restaurant offerings, and marketing. U.S. adolescents may use fewer contraceptives because they are less available than in other countries. Similarly, more Americans may die from violence because firearms, which are highly lethal, are more available in the United States than in peer countries. A stressful environment may promote substance abuse, physical illness, criminal behavior, and family violence. Asthma rates may be higher because of unhealthy housing and polluted air. In the absence of other transportation options, greater reliance on automobiles in the United States may be causing higher traffic fatalities. And when motorists do take to the road, injuries and fatalities may be more common if drunk driving, speeding, and seatbelt laws are less rigorously enforced, or if roads and vehicles are more poorly designed and maintained.

The U.S. health disadvantage probably has multiple explanations, some of which may be causally interconnected, such as unemployment and a lack of health insurance. Other explanations may share antecedents, especially those rooted in social inequality. Still others may have no obvious relationship, as in the very distinct causes of high rates of obesity and traffic fatalities. The relationships between some factors may develop over time, or even over a person's entire life course, as when poor social conditions during childhood precipitate a chain of adverse life events. Turmoil and risk-taking in adolescence can lead to subsequent setbacks in education or employment, fomenting life-long financial instability or other stresses that inhibit healthy life-styles or access to health care. In some cases, the explanation may simply be that the United States is at the leading edge of global trends that other high-income countries will follow, such as smoking and obesity.

Given the pervasive nature of the low U.S. rankings—on measures of health, access to care, individual behaviors, child poverty, and social
mobility—the panel considered the possibility that a common thread might link the multiple domains of the U.S. health disadvantage. Might certain aspects of life in modern America—including some of the choices that American society is making (knowingly or not)—be part of the explanation for the U.S. health disadvantage? There are no definitive studies on this subject, but the public health literature certainly documents the health benefits of strengthening systems for health and social services, education, and employment; promoting healthy life-styles; and designing healthier environments. These functions are not solely the province of government: effective policies in both the public and private sector can create incentives to encourage individuals and industries to adopt practices that protect and promote health and safety. In countries with the most favorable health outcomes, resource investments and infrastructure often reflect a strong societal commitment to the health and welfare of the entire population.

Because choices about political governance structures, and the social and economic conditions they reflect and shape, matter to overall levels of health, the panel asked whether some of these underlying societal factors could be contributing to greater disease and injury rates and shorter lives in the United States. And might these choices also explain the inability of the United States to keep pace with peer countries in other important health-related domains, such as education and child poverty? These are important questions for which further research is needed. It will also be important for Americans to engage in a thoughtful discussion about what investments and compromises they are willing to make to keep pace with health advances other countries are achieving. Before this can occur, the public must first be informed about the country’s growing health disadvantage, a problem that may come as a surprise to many Americans.

NEXT STEPS

The evidence regarding the U.S. health disadvantage is considerable and growing, but many fundamental questions remain about its underlying causes, the complex causal pathways that link health determinants with health outcomes, and how these pathways differ for specific subgroups of people over time and place. New data and new analyses are needed to answer these questions and to uncover the best ways of improving health outcomes in the future.

The panel offers three research recommendations for the scientific community to better understand what is driving the U.S. health disadvantage and how it can be reduced (see Box S-1). The panel recommends work to harmonize the data that are currently collected in many countries and to add questions to existing surveys, both in the United States and elsewhere; to develop new measures of health outcomes and new analytic methods.
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BOX S-1
Recommendations Relating to Research

RECOMMENDATION 1 Acting on behalf of all relevant data-gathering agencies in the U.S. Department of Health and Human Services, the National Institutes of Health and the National Center for Health Statistics should join with an international partner (such as the OECD or the World Health Organization) to improve the quality and consistency of data sources available for cross-national health comparisons. The partners should establish a data harmonization working group to standardize indicators and data collection methodologies. This harmonization work should explore opportunities for relevant U.S. federal agencies to add questions to ongoing longitudinal studies and population surveys that include various age groups—especially children and adolescents—and to replicate validated questionnaire items already in use by other high-income countries.

RECOMMENDATION 2 The National Institutes of Health and other research funding agencies should support the development of more refined analytic methods and study designs for cross-national health research. These methods should include innovative study designs, creative uses of existing data, and novel analytical approaches to better elucidate the complex causal pathways that might explain cross-national differences in health.

RECOMMENDATION 3 The National Institutes of Health and other research funding agencies should commit to a coordinated portfolio of investigator-initiated and invited research devoted to understanding the factors responsible for the U.S. health disadvantage and potential solutions, including lessons that can be learned from other countries.

for determining how various factors affect these outcomes; and to adopt a long-term sustained commitment to support this research agenda.

While these efforts are under way, the panel urges that the nation not simply wait for more data before addressing the U.S. health disadvantage: evidence is already available to begin tackling this important problem and the lead conditions responsible for it. The strength of our findings—which was a surprise to us—led us to consider what public- and private-sector leaders can do to begin to catch up with the health advances that other countries are achieving. In the recommendations related to policy, listed in Box S-2 and explained in greater detail in Chapter 10, we encourage three avenues for action: pursuing established national health objectives, alerting
the public, and exploring innovative policy options. More specifically, the panel recommends

• **Pursuing National Health Objectives** The panel urges a strengthened national commitment to existing public health objectives that address the specific health disadvantages documented in this report. That commitment should include the application of effective strategies and policies, as identified by reputable review bodies, to reform the health system, promote healthy behaviors, and improve health-related social conditions and community environments.

• **Alerting the Public** The panel envisions a robust outreach effort to inform the public about the growing U.S. health disadvantage relative to other high-income countries and to stimulate a national discussion about the implications of this for future policy, practice, and research.
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- **Identifying Innovative Policies** The panel believes that there is much to learn from a thorough examination of the policies and approaches that countries with better health outcomes have found useful and that may have application, with adaptations, in the United States. Also of value would be a series of issue-focused investigative studies to seek explanations for the specific health disadvantages documented in this report.

The life-course perspective adopted by the panel underscores the importance of early life, not only because children and youth are often the victims of the U.S. health disadvantage, as in the case of infant mortality and adolescent homicides, but also because early life is a critical developmental period that can shape health development trajectories throughout life. The seeds of illnesses that strike older adults are often planted before age 25, a period when adverse social and environmental exposures and the establishment of unhealthy behaviors and risk factors can lead to life-long consequences. The striking health and social disadvantages documented among U.S. infants, children, and adolescents emphasize the importance of child and family services, support for education, especially in early childhood, and social services that safeguard young people. At the same time, public health and social policy solutions that target middle-aged and older adults can produce important improvements in life expectancy and health, particularly because of the high prevalence of chronic diseases that afflict Americans at older ages.

**COSTS OF INACTION**

The consequences of not attending to the growing U.S. health disadvantage and reversing current trends are predictable: the United States will probably continue to fall further behind comparable countries on health outcomes and mortality. In addition to the personal toll this will take, the drain on life and health may ultimately affect the economy and the prosperity of the United States as other countries reap the benefits of healthier populations and more productive workforces. With so much at stake, especially for America’s youth, the United States cannot afford to ignore its growing health disadvantage.