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HEALTH, INCOME, & POVERTY: WHERE WE ARE & WHAT COULD HELP

Strong evidence linking income and health suggests that policies promoting economic equity may have broad health effects.

Poverty has long been recognized as a contributor to death and disease, but several recent trends have generated an increased focus on the link between income and health. First, income inequality in the United States has increased dramatically in recent decades, while health indicators have plateaued, and life expectancy differences by income have grown. Second, there is growing scholarly and public recognition that many nonclinical factors—education, employment, race, ethnicity, and geography—influence health outcomes. Third, health care payment and delivery system reforms have encouraged an emphasis on addressing social determinants of health, including income.

In this brief, we review the evidence supporting the income-health relationship and the likely mechanisms through which income affects health. We then discuss the growing importance of this association, given widening income inequality, and discuss policy levers that might help reduce income-related health disparities.

Key Points

- Income is strongly associated with morbidity and mortality across the income distribution, and income-related health disparities appear to be growing over time.
- Income influences health and longevity through various clinical, behavioral, social, and environmental mechanisms. Isolating the unique contribution of income to health can be difficult because this relationship intersects with many other social risk factors.
- Poor health also contributes to reduced income, creating a negative feedback loop sometimes referred to as the health-poverty trap.
- Income inequality has grown substantially in recent decades, which may perpetuate or exacerbate health disparities.
- Policy initiatives that supplement income and improve educational opportunities, housing prospects, and social mobility—particularly in childhood—can reduce poverty and lead to downstream health effects not only for low-income people but also for those in the middle class.

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Income And Health—The Evidence

Economic inequality is increasingly linked to disparities in life expectancy across the income distribution, and these disparities seem to be growing over time. In the 1970s, a sixty-year-old man in the top half of the income distribution could expect to live 1.2 years longer than a man in the bottom half. By the turn of the century, he could expect to live 5.8 years longer.

A landmark study by Raj Chetty and colleagues found that since 2001, life expectancy has increased by about 2.5 years for the top 5 percent of the income distribution, but there have been no gains for those in the bottom 5 percent. Men in the top 1 percent of the income distribution can now expect to live fifteen years longer than those in the bottom 1 percent. For women, the difference is about ten years—an effect equivalent to that of a lifetime of smoking.

While stark disparities in mortality along the economic gradient understandably capture our attention, we should not overlook substantial income-related differences in morbidity. The United States has among the largest income-based health disparities in the world: Poor adults are five times as likely as those with incomes above 400 percent of the federal poverty level to report being in poor or fair health.

In a nearly stepwise fashion, low-income Americans have higher rates of physical limitation and of heart disease, diabetes, stroke, and other chronic conditions, compared to higher-income Americans. Americans living in families that earn less than $35,000 a year are four times as likely to report being nervous and five times as likely to report being sad all or most of the time, compared to those living in families earning more than $100,000 a year. These disparities emerge early in life and can be transmitted across generations. For the 6.8 million children living in deep poverty (those with family incomes of less than half of poverty), there are adverse consequences across the life course related to nutrition, environmental exposures, chronic illness, and language development.

> "The United States has among the largest income-based health disparities in the world."

It is important to clearly distinguish between income and wealth. This brief focuses on income, which refers to the sum of wages, salaries, and other earnings in a given time period. By contrast, wealth encompasses the total value of assets and debts held by a person or family. Compared to income, wealth is harder to study and more unequally distributed, and it may be more important for health disparities that persist over generations.

How Income Influences Health

There are various mechanisms through which income influences health, many of which are still being elucidated. These can be divided broadly into clinical, behavioral, and environmental factors. The latter two are often closely intertwined.

CLINICAL FACTORS

Compared to higher-income Americans, low-income people face greater barriers to accessing medical care. They are less likely to have health insurance, receive new drugs and technologies, and have ready access to primary and specialty care. Low-income workers are more likely to be employed by organizations that do not offer health benefits: Less than one-third of low-income workers obtain health insurance through their employer, compared to nearly 60 percent of higher-income workers. Even after implementation of the Affordable Care Act (ACA), more than twenty-seven million Americans remain uninsured—the majority of whom are low-income people. Those without health insurance are less likely to have a regular source of medical care and more likely to forgo care because of cost concerns.

BEHAVIORAL AND ENVIRONMENTAL FACTORS

Low-income Americans also have higher rates of behavioral risk factors—smoking, obesity, substance use, and low levels of physical activity—which are powerfully influenced by the more challenging home and community environments in which they live. For example, poorer neighborhoods have a higher density

WEALTH & HEALTH

Wealth is even more unequally distributed than income in the United States and may be more important for intergenerational health disparities. While the top 10 percent of earners receive about half of all income in the United States, they hold more than three-quarters of all the wealth. The net worth of white Americans is more than fifteen times that of black Americans and thirteen times that of Hispanic Americans. During the recession of 2007–10, overall family net worth decreased by 8 percent and declined in all groups except the wealthiest 10 percent, whose net worth increased. Wealth supports educational attainment; housing stability, particularly through homeownership; and financial security, particularly during older age—all of which affect health outcomes. One recent study found that middle-aged Americans in the highest quintile of wealth had a 5 percent chance of dying and a 15 percent chance of becoming disabled over the next decade, while those in the lowest wealth quintile had a 17 percent chance of dying and a 48 percent chance of becoming disabled.

of tobacco retailers, and the tobacco industry has historically targeted low-income people through various marketing strategies. Low-income people may also have limited access to cessation counseling services and pharmacotherapies and may experience higher levels of chronic stress—all of which make it more difficult to stop smoking. Perhaps unsurprisingly, people in families that earn less than $35,000 a year are three times more likely to smoke as those in families with an annual income of more than $100,000.

Low-income communities also contend with other structural challenges that contribute to higher rates of obesity and chronic disease, including less access to fresh foods; a higher density of fast-food restaurants; and a built environment that is not conducive to physical activity, with less open space and fewer parks and sidewalks. As a result, poor adults have higher rates of obesity and are less likely to meet guideline-recommended levels of physical activity, compared to other adults.

More broadly, low-income Americans encounter numerous daily environmental exposures that create greater allostatic load—the wear and tear on the body that accumulates with repeated or chronic stressors. The communities in which low-income people live have higher levels of violence, discrimination, and material deprivation—including the lack of housing, heat, water, and electricity. These communities have more environmental pollutants, underresourced schools, and higher rates of unemployment and incarceration. For residents with a home, the threat of eviction is commonplace, as more than one in five renting families in the United States spends half of its income on housing. A robust literature links chronic stressors, including financial hardship, to deleterious genetic and hormonal changes—such as impaired DNA repair mechanisms and higher cortisol and adrenaline levels—that increase the risk of chronic disease. The negative cardiometabolic effects of poverty seem to start early and continue throughout the life course.

The Challenge Of Isolating Income Effects

Isolating the contribution of income to health can be difficult, in part because income intersects with many other social risk factors—including race, ethnicity, sex, geography, and educational status. For example, people with higher incomes tend to live in healthier neighborhoods and have higher educational attainment and more social capital. Studies aiming to unravel the income-health relationship must adjust for many interrelated factors, some of which may not be known or easily measured.

It's also clear that other socioeconomic factors can modify the effect of income on health. For example, wealthy Americans have relatively long life expectancies regardless of where they live, but poor Americans fare differently depending on geography. Among people in the bottom quartile of income, life expectancy varies by 4.5 years depending on where they live: Areas with low smoking rates and high government expenditures on public services are associated with longer life expectancies. Similarly, the health impact of low incomes may be greatest for those with lower educational attainment. Still, income seems to have an independent effect on morbidity and mortality, after other socioeconomic variables are controlled for.

> "Compared to higher-income Americans, low-income people face greater barriers to accessing medical care."

The Unique Role Of Race

Race strongly influences other socioeconomic factors, including income: Black Americans continue to have both lower incomes and shorter life expectancies than white Americans do. There are many reasons for racial health disparities, but the literature suggests that a central role is played by chronic financial hardship caused by centuries of exploitation and segregation, as well as the direct toxic effects of discrimination on mental and physical health. Even today, access to education, credit, economic opportu-

nity, and healthy environments varies across races.

The relationship between race, income, and health persists both within and across races. Low-income black Americans live shorter lives than high-income black Americans, and affluent blacks die earlier than affluent whites. A recent study suggests that race may be even more important than family income for future prospects, particularly for men: Black boys in wealthy households are more likely to become poor adults than affluent ones, while the opposite is true for white boys.

> "Low-income communities contend with…structural challenges that contribute to higher rates of…chronic disease."

While black Americans have faced unique barriers to economic mobility, other racial and ethnic groups—particularly Hispanic Americans and American Indians—also have lower incomes, fewer educational opportunities, and shorter life expectancies, compared to whites. However, while people of color generally have lower incomes than whites, most Americans with low incomes are white—and low-income white Americans have been affected in the largest numbers by the opioid epidemic, which is thought to be partly responsible for recent decreases in overall US life expectancy.

Growing Income Inequality

Examining the links between income and health is increasingly important, given current economic trends and growing income inequality in the United States. The Gini coefficient—a widely accepted measure of income inequality—has increased almost every year since the 1970s. In 1978, the share of income going to the top 10 percent of earners was 33 percent; in 2014, it was 50 percent. Since 1980, the share of income earned by the top 1 percent has increased from 8 percent to 19 percent, and the top 0.1 percent now earns 10 percent of all income. While incomes for high earners have grown rapidly in recent decades, wages for many Americans have stagnated or declined. Income inequality is now greater than at any time since before the Great Depression.

It's also clear that while low income contributes to poor health status, poor health can also contribute to lower income. Poor health can limit one's ability to work, reduce economic opportunities, inhibit educational attainment, and lead to medical debt and bankruptcy. This can create a negative feedback loop—what Jacob Bor and Sandro Galea have called the twenty-first-century health-poverty trap. The complex relationship between low educational attainment, low income, and higher risk of disease and early death has likely grown stronger in an increasingly global and information-driven economy.

A Multifaceted Policy Approach

Given that health is tightly linked to income and income is strongly influenced by public policy, economic policy must be viewed as health policy. Policy decisions that affect educational opportunities, housing prospects, and social mobility have important downstream effects on health.

Evidence increasingly suggests that health disparities exist not only between those at the top and bottom of the income distribution, but also between all the rungs of the economic ladder—creating a steady income-health gradient. Policies that promote economic equity therefore may have broad health effects, not only for people living in poverty but also for those in the middle class.

Political structures that perpetuate poverty and disproportionately represent the interests of the affluent contribute to growing inequities in both income and health. Lobbying plays a particularly large role in the US political system and generally favors the interests of the organized and well connected.

Rollbacks of the Affordable Care Act, for example, are likely to worsen both health and income inequalities. Repeal of the individual mandate is predicted to increase the number of uninsured people by four million in 2019 and by thirteen million in 2027. Low-income people have to spend a much greater proportion of

their income on health care than more affluent people do. One study of low-income families in which someone has cardiovascular disease found that one in ten experienced a catastrophic financial burden due to out-of-pocket spending—representing about two million low-income families annually. Health coverage expansion would help protect against these financial shocks while also providing direct health benefits.

Mass incarceration is another structural inequity that is deeply intertwined with income inequity. It disproportionately affects low-income communities and has devastating economic consequences for individuals, families, and neighborhoods. The number of incarcerated people in the United States has increased dramatically since the 1970s, and the United States now has more prisoners than any other country. Many previously incarcerated people face substantial barriers to employment, and felon disenfranchisement is also widespread: An estimated six million people—the majority of whom are no longer incarcerated—are denied the right to vote. Reforms that reduce minimum sentencing for nonviolent drug offenses may help, as half of the inmates in federal prisons are incarcerated for drug-related offenses.

A number of other evidence-based policy proposals to reduce economic inequity and promote economic mobility should be considered or expanded. Policies that focus on educational advancement, especially early childhood education, may be particularly effective. A comprehensive review by the RAND Corporation found that early childhood programs have positive effects on emotional and behavioral outcomes, cognitive achievement, and child health, with a return of two to four dollars for every dollar invested. Other analyses have found even larger returns on investment, including higher future earnings for children, reduced need for remedial education, and lower involvement in the criminal justice system.

Some evidence suggests that housing mobility initiatives may also help. One study evaluated the long-term effects of the Moving to Opportunity program, which randomly assigned families living in high-poverty neighborhoods to groups that were and were not given vouchers to move to low-poverty areas. Children in these families who were younger than age thirteen when they moved had an average annual income in their twenties that was 31 percent higher, compared to the average income of those who remained in high-poverty neighborhoods.

Direct financial and in-kind assistance for low-income families can also be effective. The Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamps, is the second largest antipoverty program for families with children, and research suggests that it increases economic activity and promotes well-being among people struggling with food insecurity. A 2008 report found that $1.00 in SNAP expenditures generates $1.73 in economic activity and that SNAP is among the most effective economic stimulus programs. Another study found that participation in SNAP was associated with a $1,400 annual reduction in health care costs.

Finally, the Earned Income Tax Credit (EITC) provides direct financial assistance for low-income workers and has been associated with declines in infant mortality and the rate of low-birthweight infants, as well as improved health among mothers. Further investment in the EITC, potentially targeted toward economically lagging regions, could help address inequity that has become entrenched by geography. Other initiatives such as conditional cash transfers have led to improvements in health and well-being in other countries but have not been widely tested in the United States. Universal basic income programs, in which all citizens receive a guaranteed sum of money, are more controversial, but they are increasingly a topic of antipoverty policy discussions and are now being evaluated in some countries.

> "The relationship between race, income, and health persists both within and across races."

More research is needed to understand the most effective ways to reduce poverty and disrupt the link between low income and poor health. Research should

explore the effect of policies that increase educational opportunity and economic mobility, including targeted incentive programs. For example, regressive "sin taxes" are often imposed for unhealthy behavior

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such as tobacco use, but the differential effects of financial incentives to encourage smoking cessation among low-income people are now also being explored.

Two other Health Policy Briefs published this month explore potential ways to address the morbidity and mortality burden faced by low-income people. The first brief focuses on the extent to which a higher minimum wage could reduce poverty rates and improve health outcomes. The second further explores the Earned Income Tax Credit, which constitutes one of the largest social welfare programs in the United States. A third brief, to be published later in 2018, will discuss whether policies that help people maintain cash flow and shield them from debt and bankruptcy can improve health and financial well-being.

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