

The Poor Pay More —
POVERTY'S HIGH COST
TO HEALTH

GEORGE A. KAPLAN
September 2009

The Poor Pay More —

POVERTY’S HIGH COST TO HEALTH

Introduction4

The Social Determinants of Health7

Finding Solutions19

Conclusion27

End Notes31

Figure References39

About the Author

George Kaplan is the Thomas Francis Collegiate Professor Emeritus of Epidemiology at the University of Michigan, and founded the Center for Social Epidemiology and Population Health at the University of Michigan. He is a member of the Institute of Medicine, the Academy of Behavioral Medicine Research, and the National Academy of Social Insurance. A major theme in his work is the role of "upstream" and "downstream" factors in maintaining health, delaying disease, and improving function, with an emphasis on the linking of economic, social and biological determinants. His work is frequently cited in illustration of the important role of behavioral, social, psychological, and socioeconomic factors in individual and population health. He describes his work as focused on the links between "social divides" and "health divides." He can be reached at gkaplan@umich.edu.

The views expressed in *The Poor Pay More - Poverty's High Cost to Health* are those of the author. While Jodie Levin-Epstein, Paula Braveman, Harold Pollack, and Hannah Matthews provided helpful comments, they are not responsible for the content.

Acknowledgment

The Poor Pay More – Poverty's High Cost to Health was made possible through the generous support of the Robert Wood Johnson Foundation in conjunction with its support for *Spotlight on Poverty and Opportunity*.

Spotlight on Poverty and Opportunity does not take positions on legislation and does not endorse or support any candidate for public office. Spotlight provides information on poverty and opportunity to foster public debate and to build public will to reduce poverty.

The Poor Pay More –

POVERTY'S HIGH COST TO HEALTH

◆ Introduction

This report describes many of the ways in which being poor is bad for one's health and points to policies that have the potential for restoring the prospect of good health to the lives of the poor. We present compelling evidence that poverty has an impact on not just the *body politic* but the *body corporeal* as well—that being poor leaves a broad footprint on the health of individuals. The health costs of poverty are high. Those among us who are poor tend to have more illness and die younger. These effects have been noted in recent reports from the Robert Wood Johnson Foundation *Commission to Build a Healthier America*,¹ the World Health Organization *Commission on Social Determinants of Health*,² and the United States Government Accountability Office.³ Recognizing that the poor disproportionately bear the nation's burden of ill-health is important, but how are we to break the link between poverty and poor health?

The answer may lie in the growing recognition, among the public health and medical community, that good health is not merely a function of doctor visits and adequate health care coverage. Health is also powerfully affected by a range of other factors such as neighborhood safety, work hazards, housing quality, the availability of social and economic supports during times of need, and access to nutritious food, physical activity, quality education, and jobs that pay livable wages. To be sure, individual choices play a role in shaping health outcomes. However, a person's health and well-being are also deeply affected by these *social determinants of health*.

To improve the health of the poor, decision-makers and experts must examine the policies that impact these causes of poor health. Social determinants of health largely fall outside the health sector and are generally not familiar to those studying health. At the same time, policy experts who focus on the challenges facing the poor may not be fully familiar with the health consequences of poverty. Highlighting areas in which national policies can break the link between poverty and poor health can help to build a bridge between those concerned with poverty policy and those concerned with health policy, and thus lead to more effective approaches to both.

The report begins with descriptions of these key determinants of health and the impact they have been shown to have on health. It then offers several policy options that might ease poverty and thereby improve health.

The means by which poverty damages health over the life course are many, but key elements involve: limits on opportunity and participation that come directly from inadequate financial resources; diminished early life environments and poor educational opportunities; physical environments that are dangerous and under-resourced; poor working conditions, absence of benefits, and job insecurity; lack of health insurance and access to quality medical care; and, acute and chronic stress.

This report offers examples of policies that have the potential to break these pathways that connect poverty to poor health. The ideas summarized below are meant to spur conversation across the political spectrum. While the current partisan rancor around health care reform makes it hard to remember, there have been many times in our history when bipartisanship has been central to moving important new policies ranging from the Civil Rights Act of 1964 to the Food Stamp Program, and the 1997 Children's Health Insurance program.⁴ To fully address poverty's impact on health, those with political differences will need to work together toward a common goal that benefits all Americans. The following ideas are meant to serve as a starting point for that conversation:

- ◆ **Raise the Economic Status of the Poor by—**
 - Increasing the Minimum Wage
 - Extending Coverage and Improving Usability of the Earned Income Tax Credit
 - Ensuring Access to High Quality Child Care

- ◆ **Invest in Early Childhood and in Education by--**
 - Investing in Early Learning Opportunities
 - Ensuring Continuity of Educational Opportunity to Increase Graduation Rates
 - Increasing Availability of Education, Training, and Employment Programs for Poor Adults

- ◆ **Reinforce the Safety Net by—**
 - Increasing Aid to Jobless Workers
 - Providing more Flexibility in TANF Provisions and Expanding Training Activities
 - Aligning Food, Housing, and Health Programs with the Needs of the Poor

- ◆ **Invest in Communities by--**
 - Continuing the Expansion of Neighborhood/Community Initiatives and their Integration with Education, Transportation, and Workforce Programs

- ◆ **Provide Affordable Health Care by--**
 - Ensuring that Health Care Reform Meets the Needs of the Poor with Regard to Access, Coverage, and Costs
 - Expanding Medicaid Eligibility and Benefits

The lack of good health is only one of the reasons we should care about poverty. The consequences of poverty have an impact on individuals, their families and the rest of society. Poverty robs individuals of their ability to contribute to and participate in society and reap many of its benefits. Further, long-term poverty drains limited national resources. One

estimate, based on only a subset of the potential consequences of poverty, is that the economic costs of sustained childhood poverty alone amount to \$500 billion per year, almost 4 percent of the annual GDP.⁵ While precisely measuring the impact of poverty on the nation's economy is difficult, it is clear that poverty affects not just those who are poor but the whole of society. Viewed from these perspectives, poverty is a problem for all of us. At a time when there is so much focus on reducing health care costs in the U.S., public policies that seek to improve the health of the poor should be a critical part of the debate and the solution.

◆ The Social Determinants of Health

MYRA'S STORY

(The following story, while hypothetical, offers an instructive look at how poverty can result in a lifetime of poor health.)

Myra is 12 years old. Her parents have always tried to work full-time, but their jobs come and go with the economy. Myra's mother had a difficult pregnancy and was off work for months before Myra was born. Myra's mother wanted to go back to work after she was born but Myra was born early, so she had to stay home for months. She had no paid leave and the family had to make do without her wages. Her mother now sometimes has a minimum-wage cleaning job in a mall an hour's ride away by bus, with a work schedule that changes unpredictably from day to day. Employed on an hourly basis by a subcontractor to the mall, she receives no health, retirement, or other benefits. Her father is a non-union carpenter, but works only intermittently, sometimes due to the poor economy and sometimes due to injuries he suffered years earlier in a fall from unsafe scaffolding. Without health insurance, Myra's family relies on public clinics and emergency rooms for care. Without a source of regular medical care they do not receive the routine care and screening that is important for prevention of disease. They do sometimes get Food Stamps but they don't last the full month, and they've applied for a Section 8 housing voucher but have already been on the wait-list for three years.

They have been evicted from several apartments when one health or job crisis after another leaves them unable to pay the rent. Often they reach the end of the month with little money to spend on food or other necessities. An occasional treat following a payday for one of her parents is a fast food hamburger, fries, and 32 oz. soft drink. They live in a neighborhood without parks but with a surplus of abandoned buildings and crime. School is a refuge for Myra—it is safe and she has friends there, but the teachers are burdened by too many students, too few books, and inadequate pay and training. The school has no recess or physical and health education; it lacks a nurse or counselor and offers no computer training. Some days she just doesn't feel like getting out of bed and going to school, so she just stays home and watches television. But most of the time she goes because her parents tell her it's the way life gets better. She would like to believe them but it is getting harder each day.

Myra's story, while hypothetical, reflects how many poor and near-poor children and their families live in our country. Their lives are defined by food insufficiency, low and uncertain incomes, neighborhoods lacking resources and plagued by physical and social risks, an inadequate safety net and poor access to medical care, and a host of problems that make each new day a challenge. These factors can work together in a cycle: poverty leading to poor health and poor health leading to poverty.

While Myra's story may be familiar to many people, what is less recognized is the reality that the disadvantages that define Myra's life will affect her health throughout her life. Her body is already feeling the toll. Compared to those who are less disadvantaged, Myra is more likely to be obese, have poor oral health, suffer from asthma and its complications, show increased

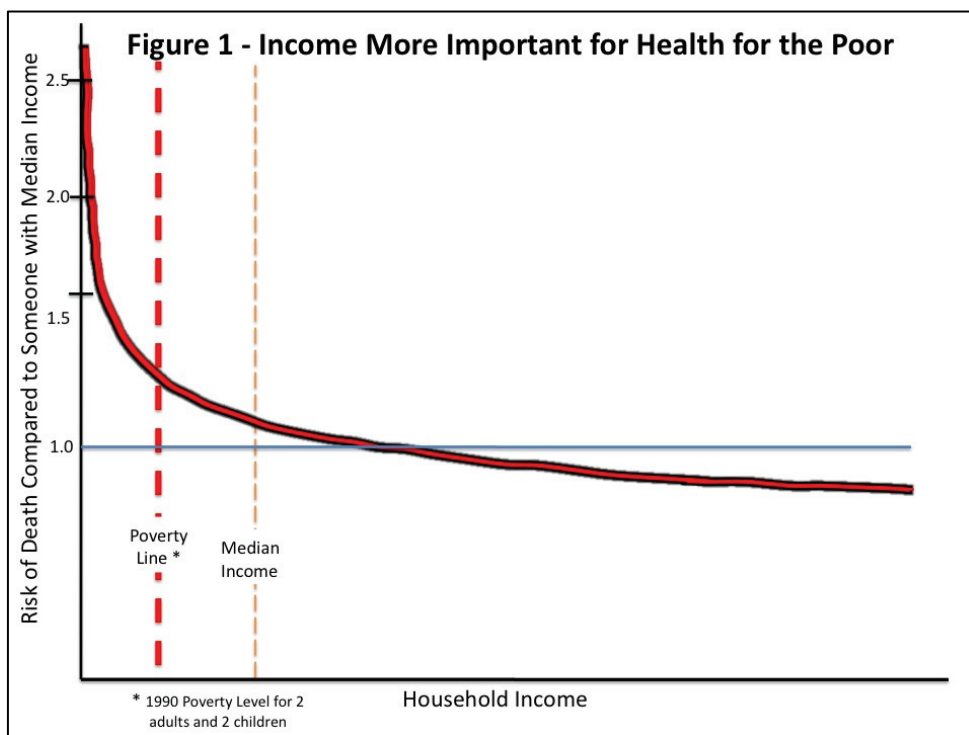
susceptibility to infection, be more likely to be injured, be depressed, be at risk for diabetes, engage in early sexual activity, and abuse drugs and alcohol.

As the damages from disadvantage accumulate over her life, we know as an adult she is also more likely to be sick, with increased risk of early pregnancy and its complications, hypertension, obesity, cardiovascular disease, diabetic complications, pulmonary disease, musculoskeletal disorders and mobility limitations, depression, and dementia.

Myra's story reflects the deep and broad imprint of poverty and low income on health, one that spans the life course. Most diseases are more common among the poor, and those that are not, such as breast cancer, tend to have worse outcomes for poor people. A recent report from the Robert Wood Johnson Foundation's *Commission to Build a Healthier America* shows the strong connection between level of poverty and life expectancy

FACT
Poverty shortens length and quality of life and impairs health throughout the life course.

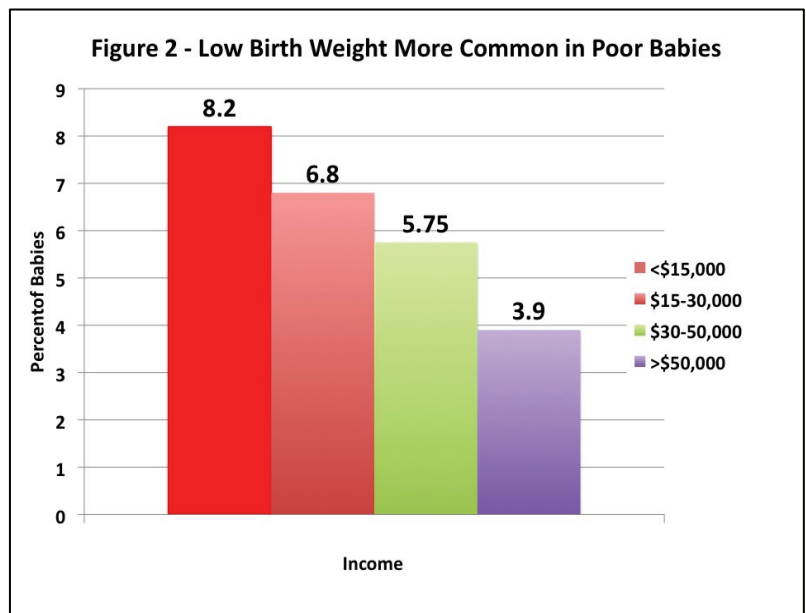
The bottom line is that income matters. Men and women in families with incomes over four times the federal poverty line can expect to live more than 6.5 years longer after age 25 than those living at the poverty line or below. A 25-year-old man in the higher-income family (one earning more than \$84,000 for a family of four) can expect to live 7.8 years longer than a 25-year-old man in the poor family (one earning about \$21,000). This disparity is roughly equivalent to the impact of heart disease, the most common cause of death, has on overall life expectancy in the U.S.



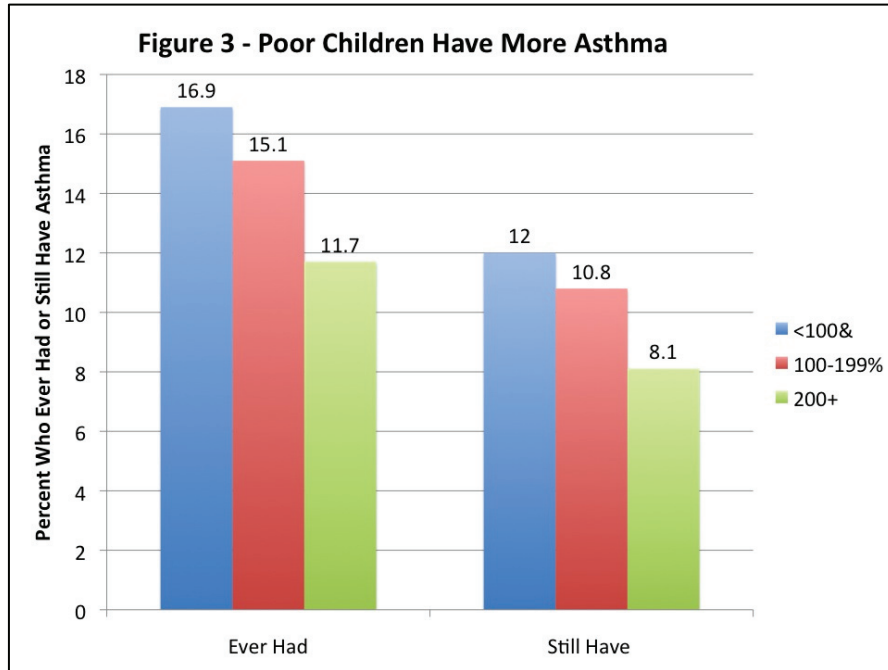
Health does generally improve with increasing income, but that is not nearly the whole story. In fact, income is much more strongly related to health for the poor than it is for the non-poor. Figure 1 shows this graphically with results based on deaths occurring over 10 years to almost a million people in the U.S. The red line compares the rate of death for people at various incomes to the rate of death of people who are at the median income.⁶ The greater the steepness of the line, the more strongly income is related to risk of dying. Where the line is more vertical, death rates decrease rapidly as income increases, but where it is more horizontal death rates do not vary much by income. In other words, Figure 1 implies that increases in the income level of the poor have a dramatically greater impact on their health than do increases in income for those who are better off.

HEALTH EFFECTS OF POVERTY BEGIN EARLY

Almost 100 years ago, Julia Lathrop, who later became the first director of the U.S. Children's Bureau, pointed out that children born to poor parents were more likely to die young.⁷ While infant mortality rates have dramatically improved since then, her observation remains current today. The impact of low income and poverty is passed on across generations as children born into poor families become poor mothers and are more likely to give birth to low-birth weight babies.

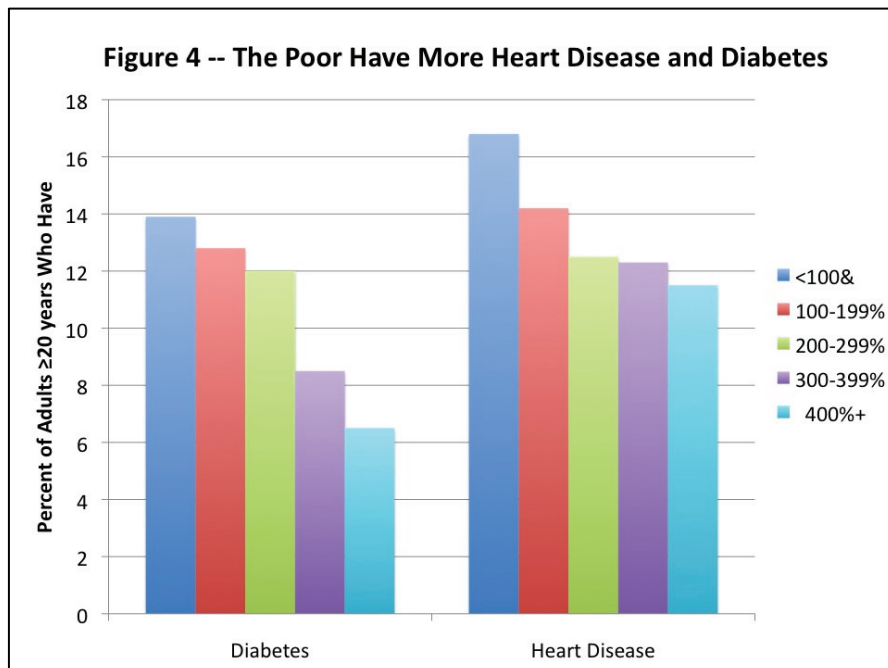


In a nationally representative sample of children born in 2001, those born to poor mothers were more than twice as likely to be born with low birth weight, putting them at increased risk for future health and developmental problems (Figure 2).⁸ As early as nine months, measures of cognitive development, social-emotional development, and general health are worse for poor children.⁹ By age 3, children in families that are below the federal poverty line are two-thirds more likely to have asthma than those in families at more than 150 percent of the poverty line.¹⁰ The problem persists at older ages as well. For example, the rates of those who have ever or currently have asthma through age 17 are more than 40 percent higher in poor children (Figure 3).¹¹



HEALTH AT MIDLIFE AND THE EFFECTS OF POVERTY

Reaching middle age does not spare one from the impact of poverty-related disease. Analysis of national data by the Commission to Build a Healthier America¹² shows that diabetes and heart disease, both leading causes of death, are 50 to 100 percent more common among poor adults than among those with incomes greater than four times the poverty level (Figure 4). Moreover, the poor are at greater risk of having complications from the two diseases.



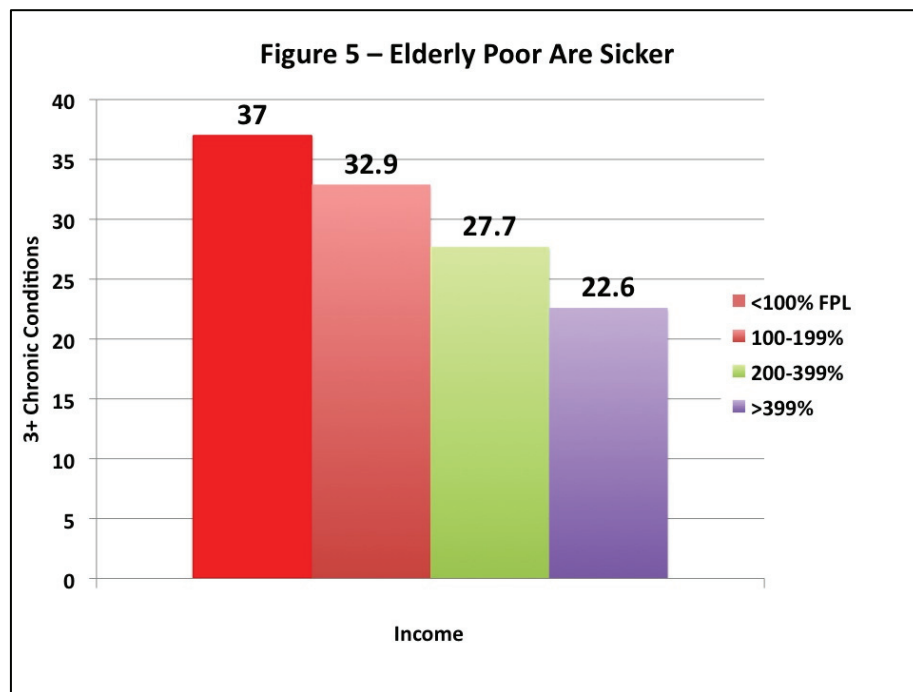
THE HEALTH CONSEQUENCES OF POVERTY IN THE ELDERLY

Poverty's effect on health are not restricted to the young and middle-aged. Those elders living with incomes below the federal poverty line are more than 60 percent more likely to have three or more chronic conditions than those whose incomes exceed four times the poverty line (Figure 5),¹³ and those with annual incomes less than \$15,000 are more than five times as likely to report being in "fair or poor" health.¹⁴

FACT

Poverty reaches across generations.

It is important to note that poverty often persists from one generation to the next. One out of three adults whose parents were in the bottom 20 percent of the income distribution will end up in the bottom quintile as an adult, and 60 percent will remain in the bottom half of the income distribution.¹⁵ Those who are born to parents in the bottom quintile have very little chance of making it to the middle class, with less than one in six making it to the median household income by middle age.¹⁶ The health consequences of being poor also reach across generations, transmitting the poor health of parents to their children, and even their grandchildren. This intergenerational transmission of poor health is due to the combined impact of poor maternal health on growth and development *in utero*, and the continuity of behavioral, environmental, social, and socioeconomic disadvantage across generations.



What we are certain about

A wide range of scientific literature has shown the connection between low income and poor health. Key findings from thousands of studies include:¹⁷

- *The vast majority of diseases are much more common among the poor and near-poor and at all ages.*
- *Poverty leads to faster progression of these diseases, as well as more complications and poorer survival.*
- *The health effects of being poor accumulate across the life course, leading to worse health and shorter lives. Being poor as a child and being poor as an adult both hurt health and well-being.*
- *While health generally improves with increasing income, the effects of income on health are much stronger for the poor.*

There is no one aspect of the lives of the poor that makes them less healthy. In fact, on virtually every determinant of poor health that we can look at, the poor are at increased risk. One factor, of course, is a lack of access to quality health care, but the poor are also at risk on a broad array of other important determinants of health—the “social” or “non-medical determinants of health.” As highlighted in the final reports from the RWJF *Commission to Build a Healthier America* and the World Health Organization *Commission on Social Determinants of Health*, these factors, which include poverty, education, conditions during early childhood, the nature of work, and the nature of communities and neighborhoods, are also powerful causes of poor health and have an impact across the entire life course of the poor.¹⁸

FACT

Critical health determinants reflect poverty’s impact.

POORER EARLY CHILDHOOD EXPERIENCES

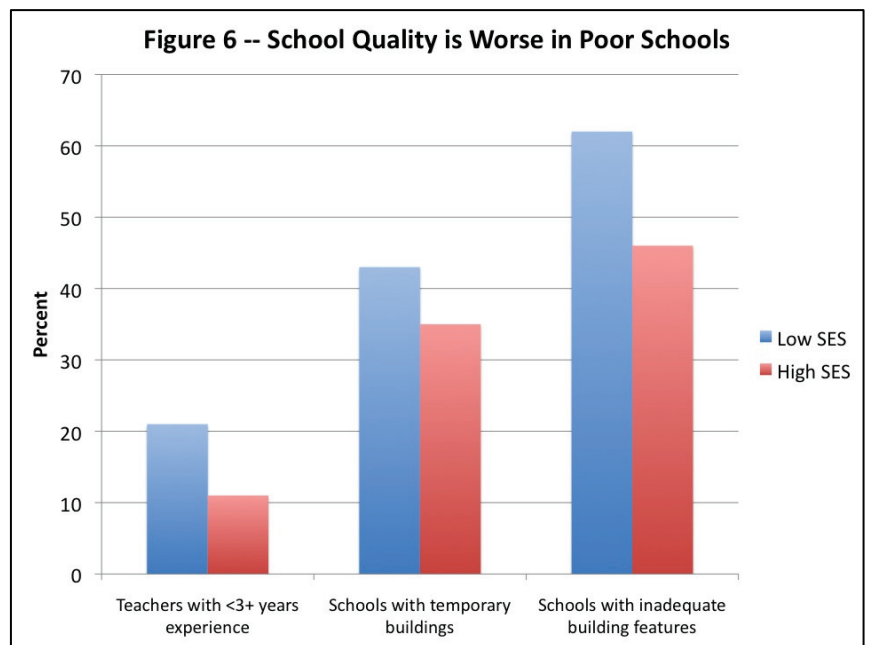
Humans are born with brains and physiology primed to respond and learn from the social and physical environment. But from birth the children of the poor are imperiled by environments that are harmful to their development and health. For example, recent studies show that by ages 7 to 12, the prefrontal cortex of the brains of poor children functions differently than in children from better-off families.¹⁹ Related work has found that the longer a child remains in poverty, the poorer is his or her memory function, which involves the same region of the brain – due to the physiological effects of chronic stress over extended periods.²⁰

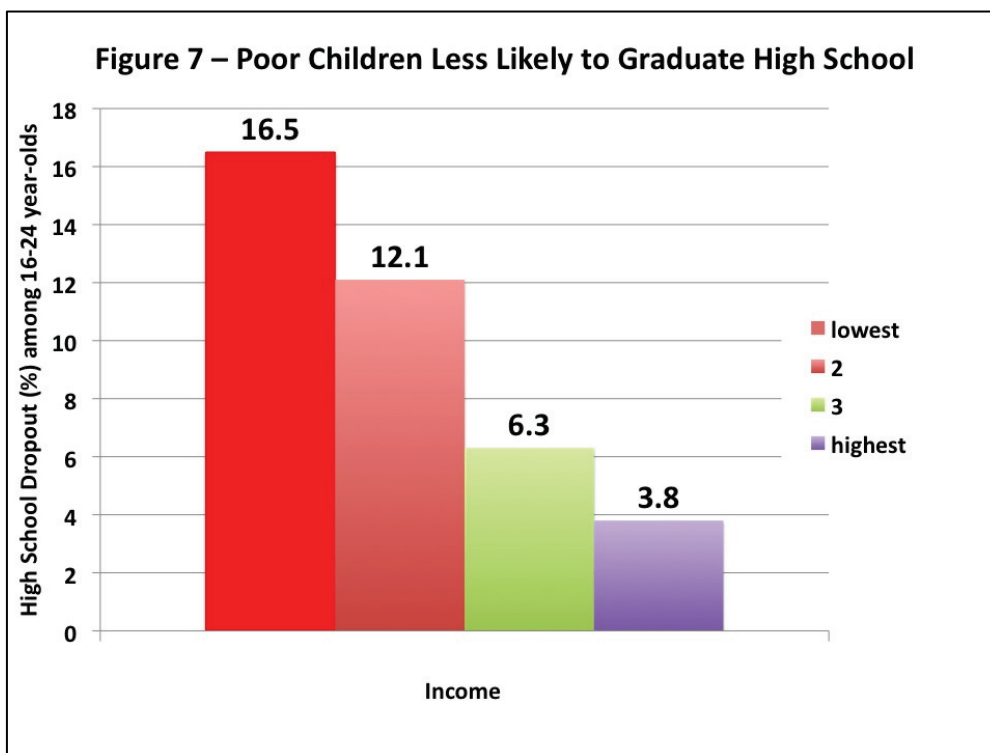
Along with higher stress, the social environment of poor children provides fewer opportunities for learning. In one study, researchers observed and recorded the verbal interactions between parents and their young children and observed that children in poor families were spoken to less, heard less complex utterances, and received less verbal encouragement from their parents.²¹ It was estimated that in the first four years of life children in poor families would have heard less than one-third as many words from adults as children in families of professionals, amounting to 13 million fewer words. Poor children heard less complex sentences and more negative statements and prohibitions.

The reasons for these differences in parent-child interactions are complex, but it is not hard to see how the realities of life for Myra’s parents, including economic and social deprivation, could translate into parental exhaustion and impoverished verbal interaction. Likewise, it is not hard to see that inadequate nutrition, poor parental mental health, higher levels of exposure to environmental hazards, and other factors are more common in the lives of poor children and threaten their health.²²

POORER EDUCATION

The educational disadvantages for poor children begin early as they tend to enter school with poorer reading and math skills than their more affluent peers. The schools attended by poor children typically provide poorer learning environments and are less likely to have an adequate supply of textbooks and workbooks. In such schools, teachers are less likely to be very experienced and the facilities are more likely to be in poor shape (Figure 6).²³ Taken together, these factors lead to lower graduation rates among the poor (Figure 7).



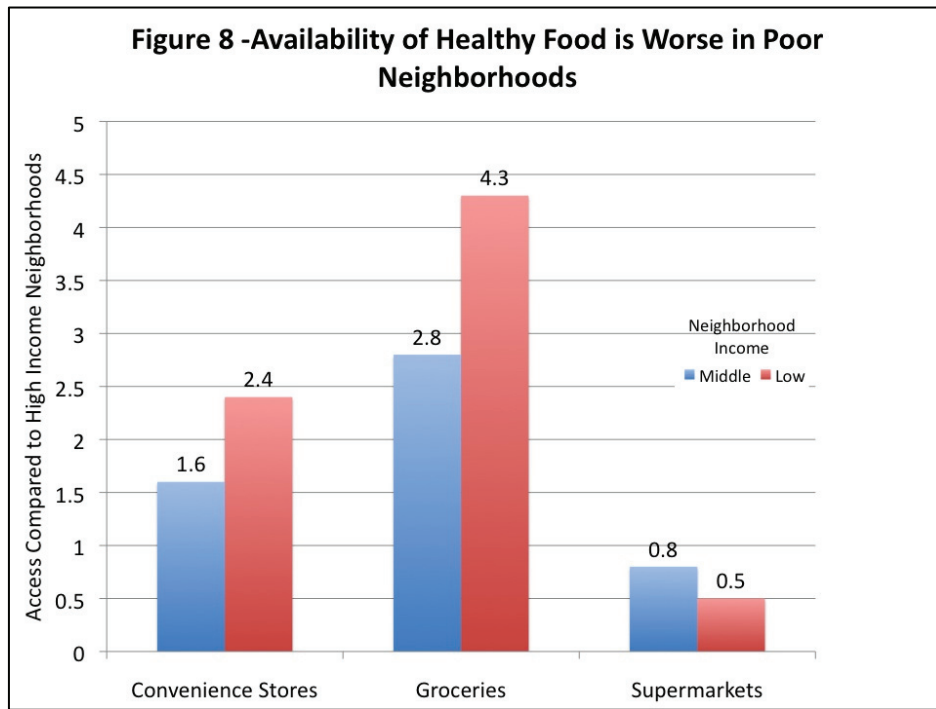


In 2006, high school dropout rates were more than four times higher for students from poor families than they were for those in families in the top 25 percent of incomes.²⁴ The economic consequences of receiving a poor education or not completing high school in a knowledge-based economy can be enormous.

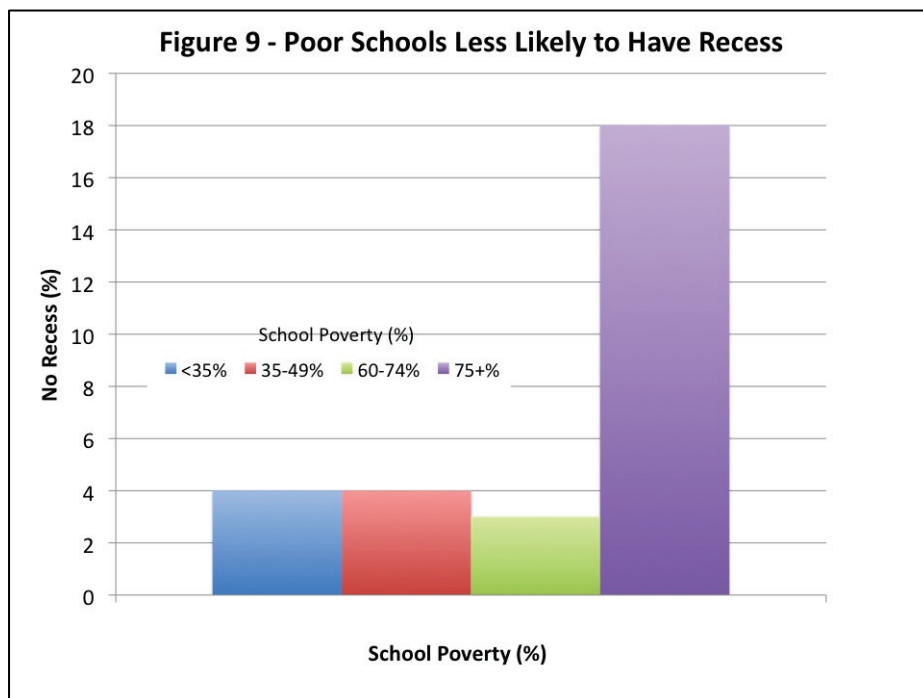
POORER ENVIRONMENTS

The environments the poor encounter can pose increased risks to their health. The disproportionate exposure of the poor to toxics and other environmental hazards was recognized in a Presidential Executive Order in 1994.²⁵ We now know that the poor are more likely to live in places with hazardous waste and large industrial facilities and have greater exposure to pesticides, lead, and outdoor air pollution – all of them factors associated with poorer health.²⁶ Additionally, poor neighborhoods are likely to have more crime and disorder, lower levels of trust and cooperation, and large numbers of people with economic, social, and psychological needs. Again, these are factors connected to poorer health.

These high levels of health risks are aggravated by the fact that poor neighborhoods have fewer resources to help support healthy lives. For example, nutritious food is harder to find in areas where the poor live. In one study, low-income neighborhoods had more than four times the number of small grocery stores and more than twice as many convenience stores, but half the number of supermarkets, a more reliable and less expensive source of fresh fruit and vegetables than small grocery stores (Figure 8).²⁷ Similarly, within walking distance of schools in lower income neighborhoods there are one-third more fast food restaurants and 50 percent more convenience stores than near schools in higher income neighborhoods.²⁸



Opportunities for physical exercise are fewer in poor neighborhoods. Poor areas have fewer physical fitness facilities, membership sports and recreation clubs, dance studios, clubs and halls, and public golf courses.²⁹ There are fewer places to safely exercise in the neighborhoods in which poor people live and in schools in these neighborhoods recess is less available. A National Center for Education Statistics study found that schools with high rates of poverty were more than four times less likely to offer recess to children than schools with low poverty rates (Figure 9).³⁰



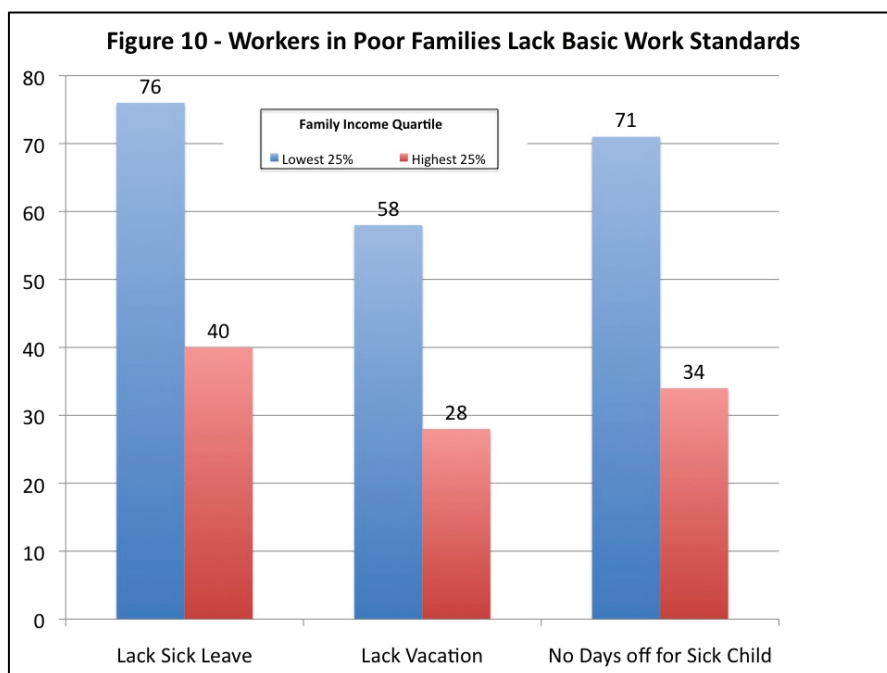
POOR WORK FOR THE WORKING POOR

Many poor people work, but often the benefits of work enjoyed by the middle class are not available to the poor. In a 2007 report from the Bureau of Labor Statistics, 7.5 million adults were defined as “working poor.”³¹ They were people who spent at least 27 weeks in the work force and yet whose incomes placed them below the poverty line. As many as two-thirds of them were working full time.³² They tend to be employed in low-wage service jobs. And many must deal with involuntary unemployment or can only find part-time work. Even for those working fulltime, they often cannot afford basic services and resources that promote healthy lives, including health insurance. Overall, the working poor are less than half as likely as other workers to receive health insurance coverage.³³ This pattern of increased health risk is passed on from one generation to the next, as 23 percent of workers with incomes below 200 percent of the poverty level live in families with children.³⁴

Along with low wages, the working poor have jobs that are less likely to have basic work standards such as sick leave or that offer time off for the worker to care for a sick child (Figure 10).³⁵ Their jobs are more likely to be unsafe and involve exposure to dangerous substances or working conditions that can lead to economically disruptive injuries and disabilities.

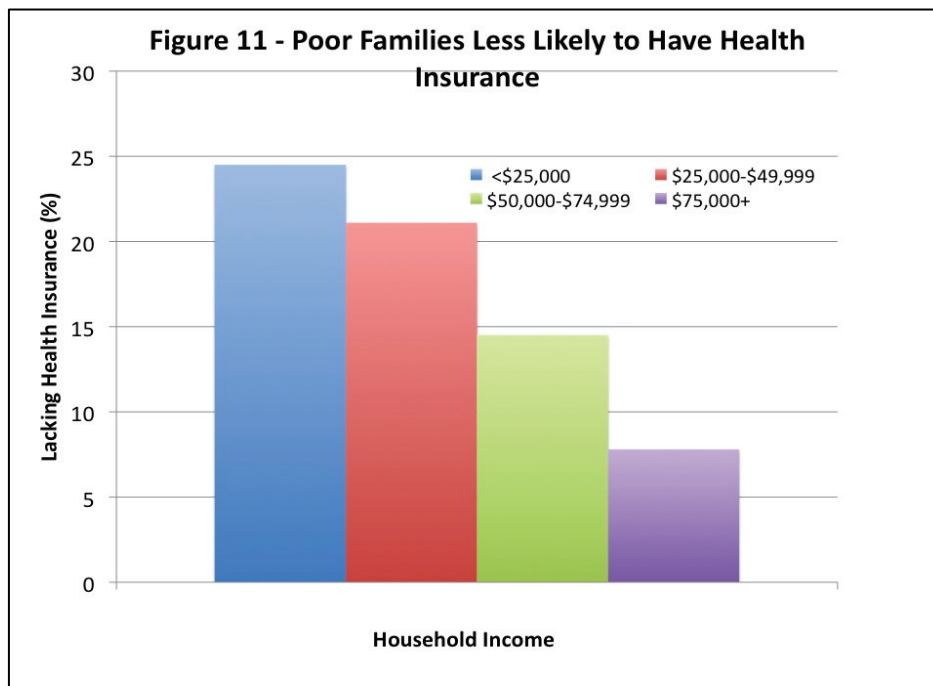
The rapid expansion of contingent work such as part-time, contracted, or time-limited jobs which provide poorer training and less safety oversight, and diffused responsibility for enforcing safety, suggests that that these unsafe working conditions will exact an increasing toll on the health of the working poor.³⁶ But it doesn't stop there.

Substantial research shows that stress at work related to job insecurity, demanding labor, and the inability to control the pace and content of work also increases the risk of poorer health for workers. Such stressors, of course, often define the jobs held by many of the working poor.



POORER ACCESS TO AFFORDABLE HEALTH CARE

Because they often lack health insurance benefits from work, many poor and near-poor families have inadequate access to medical care (Figure 11). Being poor and uninsured means having less access to preventive care, diagnostic services and treatment, and having, overall, poorer care, all of which contributes to poorer health.³⁷ Of the more than 53 million people who were without health insurance at some time in 2007, almost two-thirds of poor 18 to 64 year olds had no health insurance.³⁸ Having health insurance does not solve the entire problem, as the quality of the care the poor receive is typically worse than for those who have higher incomes. The 2007 National Healthcare Disparities Report found that on all of the 19 measures of quality of health care they studied, care for the poor was worse than that given to those who are better off financially.³⁹ The differences were not small. For example, children in families below the poverty line were three times more likely to be hospitalized for asthma – a sign of



poor care – than children from families at 400 percent or more of the poverty line. Adults with diabetes in the richer income group were 52 percent more likely to have received eye and foot examinations and blood tests for assessing control of their diabetes, standard markers of quality of care.

BEING POOR MEANS A LIFE FILLED WITH STRESS

Those who are poor often live with acute and chronic stress but lack resources to address the sources of this stress. We would expect that frequently occurring financial emergencies, difficult neighborhoods and work conditions, inadequate schools for their children, and other struggles lead poor people to become depressed and hopeless. But the effects of such chronic stress are even more profound. A large body of evidence now documents how stress affects the brain and physiological systems, and plays a role in acute and chronic diseases.⁴⁰ Thus, stress adds to the material and environmental causes of poor health among the poor.

The examples above demonstrate the many ways in which the health of the poor is put at risk on a daily basis and from generation to generation. The result is a kind of crazy quilt of risk, weaving together lack of access to quality education, medical care and other health-enhancing resources, low wages, embattled physical and social environments, and work that produces poor health. At the same time, a vicious cycle of disadvantage leading to poor health that in turn leads to further disadvantage and further poor health plays out over the life course and across generations.

FACT

Every day, across the life course and generations, the health of the poor is imperiled, but it is not inevitable

◆ Finding Solutions

Because the connection between poverty and health involves multiple contexts and determinants, no single solution is likely to be sufficient. Based on the available evidence, raising the economic status of the poor, providing affordable health care, investing in early childhood programs and education in general, reinforcing the safety net, and investing in health-enhancing resources in communities can all be useful in breaking the link between poverty and poor health (Figure 12). In what follows we provide examples of policies in each of these domains that we believe have some potential. In some of these domains the 2009 American Recovery and Reinvestment Act offers temporary new policies that start to address some of these issues. The list that follows is not all-inclusive; many additional policies could be pursued. Our goal is to generate a conversation about the merits of these proposals, as well as others, with the goal of breaking the link between poverty and poor health.



Figure 12

1. RAISE THE ECONOMIC STATUS OF THE POOR

The historical evidence shows that the U.S. has sometimes been successful in reducing poverty. For example, poverty rates of the elderly were dramatically reduced with the introduction of Social Security.⁴¹ In 1997, the elderly poverty rate was 11.9 percent. Without Social Security, the rate would have been 47.6 percent, meaning the program kept 11.4 million elderly out of poverty.⁴²

In addition to reducing the prevalence of poverty, it is also important to target reductions in the depth and duration of poverty. With regard to depth of poverty, often overlooked is that among the poor there are those who are poorer than others. Indeed, in the U.S., extreme poverty – those living below half the poverty level is not uncommon. While the rate of child poverty is 19 percent, almost half of these children live below 50 percent of the poverty threshold.⁴³ Poverty sustained over long periods, or repetitive bouts of being poor are also important to consider. Chronic poverty has been found to be related to risk of having a low birth weight baby and to the risk of developing physical and mental health problems.⁴⁴ Thus, policies to improve the health of the poor must recognize the additional health burdens associated with both deep and chronic poverty.

◆ Establish a Realistic Minimum Wage

Increasing the federal minimum wage beyond the current level of \$7.25 per hour would serve to raise the economic status of the poor.⁴⁵ Even with the recent increase, the minimum wage today is about 40 percent of the average wage for non-supervisory employees, compared to the 1950's and 1960's when it was roughly 50 percent. To return to that 50 percent level would mean an hourly wage of around \$9.25 per hour.⁴⁶ Current analyses suggest that modest increases in the minimum wage do in fact increase the wages of low-income workers earning more than the minimum wage, without significant job losses.⁴⁷ Even a wage of \$9.25 an hour is inadequate to meet basic needs. Estimates are that a two-parent, two-child family requires an annual income between \$35,000 to meet their basic needs in a low-cost rural area (e.g. East Carroll Parish, LA) and \$67,000 in a large high-cost city (Chicago, IL). Two parents working fulltime at \$9.25 an hour would earn only \$38,000 per year.⁴⁸

◆ Extend Coverage and Improve Usability of the Earned Income Tax Credit

Tax and transfer policies also can serve to increase the economic resources of the poor. The Earned Income Tax Credit (EITC) already has a major anti-poverty impact, and moves more children out of poverty than any other government program.⁴⁹ However, as pointed out in recent reports from the Center for American Progress Task Force on Poverty and the Brookings Institution Metropolitan Policy Program, there are improvements needed in the EITC.⁵⁰⁻⁵¹ These include increasing the EITC for childless workers, forgiving some income in determining eligibility for families with two wage earners, removing the cap on EITC benefits for families with three or more children, and paying out the credit in installments over the year rather than once per year.

◆ Assist Families in Ensuring Access to High Quality Child Care

Lowering the burden of childcare costs is also important. In 2007, almost 30 million children, or almost four out of 10, lived in families with incomes below 200 percent of the federal poverty level,⁵² and expenses associated with childcare are often one of the top household costs. In 49 states, the average cost of childcare for two children is greater than the average cost of renting a home.⁵³ Families below the poverty line who have children less than five years of age spend one-quarter of their income on childcare.⁵⁴ Low-income families clearly cannot afford such costs and often have to settle for inadequate childcare arrangements which may still strain their budgets and

provide a less than adequate environment for their children. Two policies that would ameliorate the financial strain are a guarantee of meaningful childcare assistance for families with income below 200 percent of the poverty level, and an expansion of the Child and Dependent Care Tax Credit that would cover a sliding amount up to 50 percent of allowable expenses for lower-income families.⁵⁵ Such policies could be a step toward the recommendation by the Commission to Build a Healthier America that “all children have high-quality early developmental support.”⁵⁶

Additional programs that directly effect wages, provide other tax credits or direct payments, subsidize housing or food costs, or provide increased income security for workers in occupations that are subject to high volatility are also important. The Center for American Progress’s proposal to cut poverty in half includes increasing the minimum wage to \$7.25, expanding the EITC and Child and Dependent Care Tax Credit and providing childcare assistance to low-income families. These policy changes reduce poverty levels by 26 percent, according to an analysis by the Urban Institute.⁵⁷ It is worth noting that the government of the United Kingdom, beginning in 1999, used similar mechanisms to meet its goal of reducing child poverty by 50 percent, although that progress has now been undermined by the global economic recession.⁵⁸

2. INVEST IN EARLY CHILDHOOD AND IN EDUCATION

◆ Invest in Early Learning Opportunities

As indicated previously, early childhood is increasingly seen as a critically important foundation for desirable behavioral, social, economic, and health outcomes later in life.⁵⁹ During these early years, access to a high-quality childcare environment may be particularly critical for poor children, and increased access and quality is part of the proposed Early Learning Challenge Fund Initiative.⁶⁰ In addition, we now have an impressive set of studies documenting the feasibility and effectiveness of intervention beginning as early as infancy and the preschool years.⁶¹ These studies, based on both small specialized model programs and large-scale programs, indicate that high-quality early childhood interventions can lead to improved cognitive development, improved reading and mathematics skills, and, in some cases, better behavioral and socio-emotional function. Additionally, these programs have been shown to result in decreases in the number of students being held back in school or placed in remedial classes. In cases where it has been possible to follow students from these programs for as long as four decades, the benefits included improved employment trajectories and higher earnings, reduced criminal involvement, and other positive behavioral, social, and economic outcomes.⁶²

Some common elements characterize the most successful programs: well-educated teachers, small class size with academically-oriented curricula, and outreach to parents.⁶³ The available evidence suggests that these programs are effective, and sometimes particularly so, for poor children.⁶⁴ Again, a *poverty lens* is useful as the features that define these successful programs are generally less available to children living in poverty. For example, less than three percent of all children who are eligible for Early Head Start are served by the program.⁶⁵ To give all children a good start, a program of comprehensive preschool interventions available at no cost to all three- and

four-year-olds from families with incomes below 150 percent of the poverty level, and on a sliding scale for other families, has been proposed.⁶⁶ Incorporating features of some of the most successful preschool programs, it would involve college-trained teachers who spend three hours per day working with the children and additional time working with their parents; student to teacher ratios of no more than 6:1; state-of-the-art academic and behavioral curricula; and wrap-around childcare.

The cost of such a national program is estimated at \$20 billion per year. Potentially offsetting this cost are the far-reaching effects of early education programs on future societal investments and reduction of future adult poverty related to program participation. Early childhood interventions have been found to return life course economic benefits of \$8 to \$14 for every \$1 spent. The proposed program is projected to have favorable returns of 4–7:1, making it very cost-effective with much of the benefits coming from improved trajectories for children from poor families.⁶⁷

◆ Ensure Continuity of Educational Opportunity to Increase Graduation Rates

The benefits of many early childhood interventions have been found to fade somewhat over time, so it is important to intervene in later years as well. In fact, the continuity of improved educational environments may be critical.⁶⁸ A critical target is the promotion of high school graduation because it is so powerfully linked to future social and economic outcomes. While some early childhood interventions have been found to improve high school graduation rates, interventions in later years have also been found to keep students in school longer.⁶⁹ Interventions at kindergarten and through third grade involving reductions in class size and improved quality of teaching have been found to increase high school graduation rates, in some cases with the effects being greater for students from poor families.⁷⁰ Even after students have entered high school, it is not too late to intervene. Interventions focused on smaller learning communities with rigorous academic curricula, extensive student-teacher interaction, high expectations, and parental and community involvement also increase high school completion.⁷¹ These interventions require additional resources, but provide good returns, with lifetime economic benefits totaling \$1.46 to \$3.54 for each dollar spent.

◆ Increase Access to Education, Training, and Employment Programs for Poor Adults

In a knowledge-based economy, post-secondary education is all but essential. This means that those who do not finish high school will require additional training and educational opportunities to advance economically. This points to a need for a continuum of supportive educational and community programs to assist young people from poor families.⁷² The recent expansion of Pell grants, which have been shown to have a positive impact on college attendance and graduation, will provide needed help, as will expansion of the American Opportunity Tax Credit. However, Pell grants, despite the expansion, will likely not meet poor students' true level of need, while the benefit of the expanded tax credit is still less for families with low incomes because they can only claim a portion of the maximum credit.⁷³ In the training arena, continued expansion of the employment and training programs in the Workforce Investment Act, increased use of the Career Academy model,⁷⁴ and increased investment in workforce

and education programs directed at poor young adults will be needed.⁷⁵ The recently announced American Graduation Initiative, with increased support for community colleges, could also help to bolster important education and training opportunities for students from poor families.⁷⁶

The use of these various educational and training initiatives, ranging from preschool to early adulthood is sometimes contrasted with expansion of income transfer programs.⁷⁷ However, just as increased education and training does not guarantee improved social and economic outcomes, simple income transfers do not guarantee access to the knowledge and skills necessary for positive trajectories. In fact, both income-transfer programs and programs to improve education and training opportunities are needed at different points in a poor person's life.

3. REINFORCE THE SAFETY NET

The poor face daily challenges that can lead to the most difficult of choices – in some cases choosing between providing heat or food to one's family.⁷⁸ The safety net provided by social insurance programs plays a major role in the lives of the poor, particularly families with children. In 2005, means-tested benefits alone, such as the EITC, Food Stamps, housing assistance programs, SSI, and TANF, lifted more than 14 million people above the poverty line and reduced the share of children who were below half the poverty line by 72 percent.⁷⁹ However, the safety net has failed many living in deep poverty; the number of children living below half the poverty line increased by 75 percent from 1995 to 2005.⁸⁰ Furthermore, employment-related assistance programs, such as unemployment assistance and TANF, become less effective when work is not available because of a distressed economy.

◆ Increase Aid to Jobless Workers

A major challenge is unstable employment, which is magnified in a distressed economy and leads to increased economic stress. The Unemployment Insurance Modernization Act (UIMA), part of the American Recovery and Reinvestment Act, provides incentives for states to have more realistic eligibility criteria for unemployment benefits, bringing into the system workers who had previously been ineligible because of various employment factors, such as hours worked. However, while there are incentives for states to elect the provisions of this act, many states have not yet chosen to do so.⁸¹

The average monthly unemployment benefits in 2008 ranged from \$800 to \$1,698, leaving families in many areas of the country unable to meet basic needs.⁸² In the most generous and most financially distressed states, the maximum length of unemployment insurance payment is currently approximately one year, but in many states it is considerably shorter. At the same time, the average length of unemployment is increasing, as is the number of long-term unemployed (those out of work more than 27 weeks), the number of formerly fulltime workers who are unemployed has increased by 79 percent and the number of those who are unemployed or marginally attached to the work force has increased by 24 percent during the last year.⁸³ In such a context, the provisions of the UIMA will be insufficient to shore up the position of the poor.

◆ Provide More Flexibility in TANF Provisions and Expand Training Activities

The economic recession has fallen hardest on the most vulnerable workers, such as those required to work under the provisions of Temporary Assistance for Needy Families.⁸⁴ The federal government should modify program rules to provide states with more flexibility in providing assistance to such families, including increased flexibility in modifying rules regarding work effort, and expanded training for such families.

◆ Align Food, Housing, and Health Programs with the Actual Needs of the Poor

Expansion of safety-net programs related to food assistance such as that provided by the SNAP and WIC programs, and housing assistance, such as that provided by Section 8 vouchers, the Low Income Home Energy Assistance Program (LIHEAP) and the Emergency Food and Shelter Program, are all critical to those living in or near poverty, and even more so in times of large-scale economic distress. In the midst of the foreclosure crisis, it should not be forgotten that one-third of all foreclosed homes are rental units, and many of those are occupied by those who are on the cusp of falling into poverty. Finally, without question there are major strains placed on the Medicaid system by the current financial crisis, although such pressures preceded the crisis. Poor families are at risk of seeing a simultaneous downhill slide of their health and economic status when their access to quality care during a health crisis is not readily available due to program cuts brought on by the economic downturn. The American Recovery and Reinvestment Act (ARRA) does provide assistance in some of these areas, through aspects of the Emergency Unemployment Compensation (EUC) program, the Workforce Investment Act, the TANF Emergency Contingency Fund, and additional funding of the Supplemental Nutrition Assistance Program (SNAP), the Women, Infants, and Children (WIC) nutrition program, and the Emergency Food Assistance Program. The ARRA provisions to strengthen the safety net for the poor are not permanent, and these important additions should be extended to provide continued benefits to improve the economic, social and health status of the poor.

4. INVEST IN COMMUNITIES

Where one lives affects access to basic necessities like food and housing, good schools, jobs, medical care, food, and recreation, as well as connections to networks that are important to individual, family, social, and economic success. Because neighborhoods and communities are so complex, there are no simple, one-size-fits-all policies to improve the places where the poor live. There has been a tension between approaches that move the poor to better places (e.g., Moving to Opportunity Program) and approaches that try to improve the places where people live through reduction of concentrated poverty and segregation (e.g., HOPE VI), and for each there are both successes and disappointments.⁸⁵ Increasingly, it has become clear that successful approaches to improving the places where poor people live will involve multi-sector strategies that focus on housing, job development and access to jobs, education and training, individual and institutional capacity building, and other needs.⁸⁶ Of course, coordination of such efforts is critical but difficult.

While residential relocation and community development programs will always need to be

configured to the local context, the role of federal policies should not be underestimated. For example, there is a growing recognition that the EITC affects not only families but communities as well.⁸⁷ The EITC returns more than \$1 million per square mile to some communities, and in one Ohio county during one quarter in 2003 it returned more to county residents than all wages in the local hotel industry.⁸⁸ Thus, expansion of the EITC program could result in substantial benefits not to just individuals and families but also to communities.

◆ Continue the Expansion of Neighborhood/Community Initiatives and their Integration with Education, Transportation, and Workforce Programs

Federal policies can improve local environments more directly as well. The expansion of the Community Development Block Grant (CDBG) in the 2009 stimulus legislation also promised to help improve poor neighborhoods. The evidence suggests that the CDBG does have beneficial impact on poor neighborhoods, although some question its bricks-and-mortar focus.⁸⁹ A major step forward is the linkage of HUD activities, such as the CDBG/Choice Neighborhoods Initiative to schools, early childhood education, public assets, transportation and employment opportunities. It represents an opportunity to move beyond the more narrow sector-based focus of previous efforts at community development, and in the process, strive to address a variety of place-based determinants of health.⁹⁰

5. PROVIDE AFFORDABLE HEALTH CARE

In 2002, the Institute of Medicine⁹¹ reported a broad set of findings indicating that those who lacked health insurance had poorer access to preventive and curative medical care, received poorer quality of care, and had worse health than those who had health insurance. In addition to the health costs of inadequate coverage, there are economic costs as well. In a 2001 study, in about half of the bankruptcies that were studied, medical costs were the reason for the bankruptcy.⁹² A recent follow-up to that study found that the number had risen to 62 percent in 2007, and that it was over twice as likely that bankruptcy had a medical cause in 2007 than in 2001.⁹³

Subsequent analyses have further underscored the findings about the health consequences of lacking insurance.⁹⁴ There is no question that providing health care coverage can lead to increased access to important preventive and diagnostic services, better management and control of health problems when they occur, and reduced morbidity and higher levels of function among those who are ill. For example, those who lost insurance were 82 percent more likely to report a decline in health than those who continued to be insured.⁹⁵ Lack of health insurance has also been estimated to increase the risk of death over an eight-year period by 43 percent for those ages 55 to 64, accounting for over 100,000 additional deaths in the United States during the same eight years.⁹⁶

As indicated earlier, the poor bear a double burden – greater risk of ill health and less access to high-quality health care. In the study mentioned above, the impact of lack of health insurance was twice as strong for those in the bottom 25 percent of household income, than for those better off. All of this means that the debate over health care reform and health insurance coverage is particularly crucial to the poor.

- ◆ **Ensure that Health Care Reform Meets the Needs of the Poor with Regard to Access, Coverage, and Costs**

As the nation considers sweeping health care reform, we can view the issue through a *poverty lens* and note that nearly 45 percent of poor adults are uninsured.⁹⁷ All proposals should be carefully examined to see if the benefits of guaranteed health care coverage will be extended to those who have been heretofore left out. Second, employment-based health insurance generally doesn't work for the poor. For those who are working, it is either not provided by their employers, or lack of job security and the resultant high levels of job turn-over all mean that coverage is inadequate or sporadic. If it is available, it is usually too expensive; the average annual out-of-pocket premium cost for a family in 2008 was \$3,354, a prohibitive amount for low-income families.⁹⁸ Deductibles drive the costs higher. Overall, 13.9 percent of Americans under age 65 were unable to fill a prescription in 2007 because of cost. For those who had incomes below 200 percent of the poverty level, it was true for almost one in three.⁹⁹

- ◆ **Expand Medicaid Eligibility and Benefits**

Congress is currently considering major policy changes to address the problems of medical care coverage, access to medical care and the associated costs. From a *poverty lens* perspective, one possible solution would be expansion of Medicaid eligibility and benefits.¹⁰⁰ Presently, federal regulations generally exclude from Medicaid benefits the large number of the non-elderly uninsured who are childless, amounting to 67 percent of all low-income uninsured adults. These are not just young people entering the workforce; in fact almost six in 10 of the low-income uninsured are between ages 30 and 64.¹⁰¹ According to recent estimates, bringing into Medicaid those childless adults below 150 percent of the poverty level and boosting participation rates would reduce the total number of uninsured by 24 percent, a reduction of 11.8 million from a total of 49 million.¹⁰² Additional changes that would base eligibility solely on income would result in even further reductions in the number of low-income uninsured. As a recent Kaiser Family Foundation report points out, Medicaid is an efficient and cost-effective program that already serves 60 million Americans. Increasing eligibility and benefits is one mechanism that could prove effective in providing affordable health care for the poor.

◆ Conclusion

WILL THESE POLICIES IMPROVE HEALTH?

Many benefits may arise from improving the economic status of the poor, making affordable health care available to all, investing in early childhood and education, reinforcing the safety net, and improving the places where the poor live. Is better health one of them? Thousands of research findings strongly support such a conclusion. But we have few formal policy experiments or analyses of other kinds of data that conclusively demonstrate such health effects. It is not that there is an abundance of negative findings; rather there have been few attempts to examine the health impacts of income, education, safety net and community policies. The research literature, which is largely based on studies of associations between such policies and health outcomes, is large and convincing to many, but in the absence of formal “gold standard” experimental tests of the effects of these policies on health outcomes, questions about causality remain for some. It is difficult to do such studies because many health problems develop over long periods, making research difficult. Equally important, many evaluations of social and economic policies do not include adequate health measures or any health measures at all.¹⁰³

There is some evidence that does support the links between improved economic status and health outcomes. For example,¹⁰⁴ an expanded pension system improved health, and other increases in income were found to be related to better health and lower mortality and to less behavioral psychopathology in children.¹⁰⁵ Evidence suggestive of causal effects of income on health has also been found in other studies,¹⁰⁶ and income shocks have been found to affect mortality in three national studies.¹⁰⁷ In addition, SSI payments were found to have an effect on mobility problems in the elderly.¹⁰⁸ None of this evidence is perfect, which is certainly not unusual in the policy arena, but the consistency and breadth of the evidence is impressive. With such evidence, there is a danger in “making the perfect the enemy of the good.” At the same time, more long-term research focused on the poverty-health relationship is needed.

WHY MUST WE ACT NOW?

Today, many low-income families, like the one described in the hypothetical story of Myra, are reeling from the economic recession. And we know that when income gaps widen between the rich and the poor, health inequalities widen as well. From 1980-2000, a period when the poor were losing ground to the wealthy, the life expectancy gap between those living in the most disadvantaged areas (bottom decile) and those living in the most advantaged areas (top decile) increased from 2.8 years to 4.5 years, a 60 percent increase.¹⁰⁹

There are many reasons to be concerned about the well-being of the poor. Poverty limits the ability of individuals to fully participate in society; they miss out on the benefits of such participation as does society as a whole. Poverty’s effects spread within families and across generations and require social expenditures that take resources from other areas.

We also now see that the effects of poverty go beyond social and economic concerns and are felt on the body as well. The notion that the “poor pay more” extends to their bodies as well. In an endless cycle, we have an endgame in which poverty begets poor health and poor health can lead to poverty. In his acceptance speech for the Nobel Prize, Martin Luther King Jr. pointed out that “...In the final analysis, the rich must not ignore the poor because both rich and poor are tied in a single garment of destiny. All life is interrelated, and all men are interdependent. The agony of the poor diminishes the rich, and the salvation of the poor enlarges the rich.”¹¹⁰

It is not enough to simply acknowledge that poverty robs some of us of good health and weakens us as a country. Much is known about the potential for national policies, and related policies at the state and local level, to break the links between poverty and poor health. Applying such knowledge is a critical step in improving the health of our nation.

Moving Forward with Greater Knowledge

This report points to a number of policy initiatives that could serve to improve the health of the poor. Additionally, we recommend these other steps:

- *Evaluation of social and economic policy initiatives should include Health Impact Assessments focused on the health of the poor;*
- *The linkage of health data to social and economic programs, a critical element in demonstrating the link between health and social and economic policies, should be pursued and administrative barriers eliminated while respecting privacy concerns;*
- *Consistent with previous recommendations from the National Academy of Sciences, both public and private entities in the health sector should report on services and outcomes by socioeconomic status;¹¹*
- *Opportunities to conduct experiments that test the impact of interventions on social determinants of health on the health of the poor should be actively pursued.*

Making Connections

There is increasing interest in both the public and private sector in the links between poverty and health. A few of the many organizations involved in placing this concern into the policy arena are listed here:

- *In Alameda County, California, the County Health Department has convened working groups on poverty and other social determinants of health and published *Life and Death from Unnatural Causes: Health and Social Equity in Alameda County*.
http://www.acphd.org/user/data/DataRep_ListbyCat.asp?DataRepdivId=2&DataRepdivcatid=62*
- *In Minnesota, the Department of Community Health Services brought together 32 departments, organizations, and groups and issued *A Call for Action: Advancing Health for All Through Social and Economic Change*.”
<http://www.health.state.mn.us/divs/cfh/ophp/resources/docs/calltoaction.pdf-3360.7KB>*
- *The National Association of County and City Health Officers’ National Coalition for Health Equity has includes representatives from 58 jurisdictions to connect, share strategies, and develop regional alliances around issues related to poverty and other social determinants of health. <http://healthequity.ning.com/>*
- *Spotlight on Poverty and Opportunity, with support from 17 foundations, has highlighted the links between poverty and poor health.
http://www.spotlightonpoverty.org/health_and_poverty.aspx*
- *Unnatural Causes...Is Inequality Making us Sick?—an award winning documentary on poverty and other social determinants of health was shown on PBS and has been used in over 12,000 community dialogues, policy forums, trainings, town hall meetings, and other events based around the series.
http://www.unnaturalcauses.org/about_the_series.php*

END NOTES

¹ Miller W, Simon P, Maleque S (eds.) (2009). *Beyond Health Care: New Directions to a Healthier America*. Princeton, NJ: Robert Wood Johnson Foundation.

<http://www.commissiononhealth.org/Report.aspx?Publication=64498>

² CSDH (2008). *Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health*. Final Report of the Commission on Social Determinants of Health. Geneva, World Health Organization. http://www.who.int/social_determinants/thecommission/finalreport/en/index.html

³ United States Government Accountability Office (2007). *Poverty in America: Economic Research Shows Adverse Impacts on Health Status and Other Social Conditions as well as the Economic Growth Rate*. Washington DC: GAO Report # GAO-07- 344.

⁴ <http://www.bipartisanpolicy.org/bipartisanship/timeline>

⁵ Duncan GJ, Kalil A, Ziol-Guest K (2008). *Economic costs of early childhood poverty*. Washington, DC: Partnership for America's Economic Success, Issue Paper #4.

http://www.partnershipforsuccess.org/index.php?id=7&tag_list=persons&tag_item=10&MenuSect=7

⁶ Wolfson M, Kaplan G, Lynch J, Ross N, Backlund E. (1999). Relation between income inequality and mortality: empirical demonstration. *BMJ*;319(7215):953-955.

⁷ New York Times, February 7, 1915

⁸ Nepomnyaschy L. (2009) Socioeconomic gradients in infant health across race and ethnicity. *Maternal and Child Health Journal*; online access DOI 10.1007/s10995-009-0490-1/

⁹ Halle T, Forry N, Hair E, Perper K, Wandner L, Wessel J, Vick, J (2009). *Disparities in Early Learning and Development: Lessons from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B)*. Washington, DC: Child Trends.

¹⁰ Brooks AM, Byrd RS, Weitzman M, Auinger P, McBride JT (2001). Impact of Low Birth Weight on Early Childhood Asthma in the United States. *Archives of Pediatric and Adolescent Medicine*; 155:401-6.

¹¹ Bloom B, Cohen RA. (2009) Summary health statistics for U.S. children: National Health Interview Survey, 2007. National Center for Health Statistics. *Vital Health Stat* 10(239).

¹² Robert Wood Johnson Foundation, op. cit.

¹³ National Center for Health Statistics (2006) *Health, United States, 2006 With Chartbook on Trends in the Health of Americans*. NCHS: Hyattsville, MD.

¹⁴ Pamuk E, Makuc D, Heck K, Reuben C, Lochner K (1998). *Socioeconomic Status and Health Chartbook*. Health, United States, 1998. Hyattsville, Maryland: National Center for Health Statistics. 1998.

-
- ¹⁵ Mazumder B (2008). Upward Intergenerational Economic Mobility in the United States Pew Charitable Trust, Economic Mobility Project, May 2008
http://www.economicmobility.org/reports_and_research/other?id=0004
- ¹⁶ Hertz T (2006). Understanding mobility in America. Washington, DC: Center for American Progress.
<http://www.americanprogress.org/issues/2006/04/b1579981.html>
- ¹⁷ Kaplan GA, Haan MN, Syme SL, Minkler M, Winkleby M. Socioeconomic status and health. In: Amler RW, Dull HB, eds. Closing the gap: the burden of unnecessary illness. New York: Oxford University Press, 1987:125-29 [suppl to Am J Prev Med 1987;3(5)].
- Haan MN, Kaplan GA, Syme SL. Socioeconomic status and health: old observations and new thoughts. In: Bunker JP, Gomby DS, Kehrer BH, eds. Pathways to health: the role of social factors. Menlo Park, CA: Henry J. Kaiser Family Foundation, 1989:76-135. <http://hdl.handle.net/2027.42/51548>.
- Adler NE; Boyce WT; Chesney MA; Folkman S; Syme SL. Socioeconomic inequalities in health. No easy solution. JAMA, 1993 Jun 23-30, 269(24):3140-5.
- Davey Smith G (ed.) (2003). Health Inequalities: Lifecourse approaches. Bristol, UK: Policy Press.
- Singh-Manoux A, Ferrie JE, Chandola T, Marmot M (2004). Socioeconomic trajectories across the life course and health outcomes in midlife: evidence for the accumulation hypothesis? International Journal of Epidemiology;33:1-8
- Beebe-Dimmer J, Lynch JW, Turrel G, Lustgate S, Raghunathan T, and Kaplan GA (2004). Childhood and Adult Socioeconomic Conditions and 31-Year Mortality Risk in Women . American Journal of Epidemiology; 159:481-490.
- Wolfson M, et al., op cit.
- ¹⁸ Miller W. Simon P, Maleque S (eds.) (2009). *Beyond Health Care: New Directions to a Healthier America*.
CSDH (2008). *Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health*.
- ¹⁹ Kishuyama MM, Boyce WT, Jimene AM, Perry LM, Knight RT (2008). Socioeconomic disparities affect prefrontal function in children. Journal of Cognitive Neuroscience; 21: 116-15.
- ²⁰ Evans GW, Schamberg MA (2009). Childhood poverty, chronic stress, and adult working memory. PNAS;106:6545-49.
- ²¹ Hart, Betty; Risley, Todd R. (1995). *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD, Brookes Publishing Company.
- ²² Cook JT, Frank DA (2008). Food Security, Poverty, and Human Development in the United States. Annals of the New York Academy of Sciences; 1136:193-2.
- ²³ Rouse CE, Barrow L (2006). U.S. Elementary and Secondary Schools: Equalizing Opportunity or Replicating the StatusQuo? Future of Children; 16:99-123.

-
- ²⁴ National Center for Education Statistics, Digest of Education Statistics, http://nces.ed.gov/programs/digest/d07/tables/dt07_106.asp
- ²⁵ Executive Order 12898 issued in 1994 by President Clinton
- ²⁶ deFur PL, Evans GW, Hubal EAC, Kyle AD, Morello-Frosch RA, Williams DR (2007). Vulnerability as a Function of Individual and Group Resources in Cumulative Risk Assessment. *Environmental Health Perspectives*;115:817-24.
- ²⁷ Moore LV, Diez Roux A (2006). Associations of Neighborhood Characteristics With the Location and Type of Food Stores. *American Journal of Public Health*; 96:325-31.
- ²⁸ Zenk SN, Powell LM (2008). US secondary schools and food outlets. *Health & Place*;14, 336-346.
- ²⁹ Powell LM, Slater S, Chaloupja FJ (2005). Availability of Physical Activity–Related Facilities and Neighborhood Demographic and Socioeconomic Characteristics: A National Study. *American Journal of Public Health*;96:1676–1680.
- ³⁰ National Center for Education Statistics. Calories in, calories out: Food and exercise in public elementary schools (2005). Fast Response Survey System (FRSS 2005): May 2006. <http://nces.ed.gov/pubs2006/nutrition/>
- ³¹ U.S. Census Bureau (2008). Income, Poverty, and Health Insurance Coverage in the United States:2007, Current Population Reports, series P-60, no. 235, August 2008. <http://www.census.gov/prod/2008pubs/p60-235.pdf>
- ³² US Department of Labor, Bureau of Labor Statistics (2002). A Profile of the Working Poor, 2002. Report 976. www.bls.gov/cps/cpswp2002.pdf
- ³³ Acs G, Nichols A. Low-Income workers and their employers: Characteristics and challenges. Urban Institute, 2007. <http://www.urban.org/url.cfm?ID=411532>
- ³⁴ *ibid.*
- ³⁵ Heymann J (2002). Can Working Families Ever Win? Helping parents succeed at work and caregiving. <http://bostonreview.net/BR27.1/heyman.html>
- ³⁶ Cummings KJ, Kreiss K (2008). Contingent Workers and Contingent Health: Risks of a Modern Economy. *JAMA*; 299: 448 - 450.
- ³⁷ Hadley J (2003). Sicker and poorer—The consequences of being uninsured: A review of the research on the relationship between health insurance, medical care use, health, work, and income,” *Medical Care Research and Review* 60(2)(supplement):3S–75S, June 2003.
- ³⁸ Cohen RA, Martinez ME. Health Insurance Coverage: Early Release of Estimates from the National Health Interview Survey, January – June, 2007. Atlanta: Centers for Disease Control, National Center for Health Statistics. December, 2007.
- ³⁹ U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality (2007). National Healthcare Disparities Report. Rockville, MD, AHRQ. <http://www.ahrq.gov/qual/qrd07.htm>

-
- ⁴⁰ McEwen B, Lasley EN (2002). *The End of Stress As We Know It*. Washington, DC: Joseph Henry Press.
- ⁴¹ Engelhardt GV, Jonathan GJ. Social security and the evolution of elderly poverty. NBER Working Paper 10466. <http://www.nber.org/papers/w10466>
- ⁴² Porter KH, Larin K, Primus W (1999). Social Security and Poverty Among the Elderly: A National and State Perspective. Washington, DC: CBPP. <http://www.cbpp.org/cms/index.cfm?fa=view&id=1864>
- ⁴³ See <http://datacenter.kidscount.org/data/acrossstates/Rankings.aspx?ind=45>
- ⁴⁴ Starfield B, Shapiro S, Weiss J, et al. (1991) Race, family income, and low birth weight. *American Journal of Epidemiology*;134,10:1167-74.
- Lynch JW, Kaplan GA, Shema SJ (1997). Cumulative impact of sustained economic hardship on physical, cognitive, psychological, and social functioning. *New England Journal of Medicine*;337(26):1889-1895.
- ⁴⁵ Center for American Progress Task Force on Poverty (2007). From Poverty to Prosperity: A National Strategy to Cut Poverty in Half. Washington, DC: Center for American Progress. http://www.americanprogress.org/issues/2007/04/poverty_report.html
- ⁴⁶ \$9.25 is approximately 50% of the median average hourly earnings of production and nonsupervisory workers on private nonfarm payrolls in July of 2009. <http://www.bls.gov/news.release/empsit.t17.htm>
- ⁴⁷ Bernstein J, Schmitt J (2000). The impact of the minimum wage: Policy lifts wages, maintains floor for low-wage labor market. Economic Policy Institute Briefing Paper, 2000. http://www.epi.org/publications/entry/briefingpapers_min_wage_bp/
- ⁴⁸ Dinan KA (2009). Budgeting for Basic Needs: A Struggle for Working Families. National Center for Children in Poverty. http://www.nccp.org/publications/pub_858.html
- ⁴⁹ Center on Budget and Policy Priorities (2008). Policy Basics: The Earned Income Tax, 2008. <http://www.cbpp.org/cms/?fa=view&id=2505>
- ⁵⁰ Center for American Progress (2007). From poverty to prosperity-A national strategy to cut poverty in half, 2007. http://www.americanprogress.org/pressroom/releases/2007/04/poverty_taskforce.html
- ⁵¹ Berube A, Park D, Kneebone E (2008). Metro Raise: Boosting the Earned Income Tax Credit to Help Metropolitan Workers and Families. http://www.brookings.edu/reports/2008/05_metro_raise_berube.aspx
- ⁵² Douglas-Hall A, Chau M (2008). Basic Facts about Low-Income Children: Birth to Age 18. National Center on Children in Poverty. http://www.nccp.org/publications/pub_845.html
- ⁵³ National Association of Child Care Resource and Referral Agencies (2006). Breaking the Piggy-Bank: Parents and the High Price of Child Care. <http://www.naccrra.org/news/press-releases/21/>
- ⁵⁴ Dinan KA, op cit.

⁵⁵ Center for American Progress, op cit.

⁵⁶ <http://www.commissiononhealth.org/EarlyChildhood.aspx>

⁵⁷ *ibid*

⁵⁸ Bell K (2008). The experience of the U.K. child poverty target. Washington, DC: Center for American Progress. http://www.americanprogress.org/issues/2008/11/uk_child_poverty.html

⁵⁹ Braveman P, Sadegh-Nobari T, Egerter S (2008). Early Childhood Experiences and Health: Laying the Foundation for Health Across a Lifetime. Commission to Build a Healthier America, June, 2008. www.rwjf.org/files/research/commissionearlychildhood062008.pdf

Shonkoff JP, Phillips B (eds.) *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, D.C., The National Academies Press, 2000.

U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, & Evaluation, *Preliminary Findings for the Early Head Start Prekindergarten Followup*, 2006.

⁶⁰ <http://www.ed.gov/about/inits/ed/earlylearning/elcf-factsheet.html>

⁶¹ Karoly LA, Greenwood PW, Everingham SS, Hoube J, Kilburn MR, Rydell CP, Sanders M, Chiesa J (1998). Investing in our children. Santa Monica, CA: The Rand Corporation.

Currie J (2001). Early childhood education programs. *Journal of Economic Perspectives*;15:213-38.

Keating DE, Simonton SZ (2008). Health effects of human development policies. In: Schoeni RF, House JS, Kaplan GA, Pollack H. (eds) *Making Americans Healthier: Social and Economic Policy as Health Policy*. New York, NY: Russell Sage Foundation.

⁶² Schweinhart LJ, Montie J, Xiang Z, Barnett SW, Belfield CR, Nores M (2005). Lifetime Effects: The High/Scope Perry Preschool Study through Age 40. Monographs of the High/Scope educational Research Foundation, #14. Ypsilanti, MI: High/Scope Press.

⁶³ Duncan GJ, Ludwig J, Magnuson KA (2007). Reducing Poverty through Preschool Interventions. *The Future of Children*;17:143-160.

⁶⁴ Karoly LA, Kilburn MR, Cannon JS (2005). Early Childhood Interventions: Proven Results, Future Promise. Santa Monica, CA: RAND.

Pungello EP, Campbell FA, Barnett WS (2006). Poverty and Early Childhood Educational Intervention. Poverty and Early Childhood Education. Center for Poverty, Work and Opportunity: Policy Brief Series. www.law.unc.edu/povertycenter

⁶⁵ Ewen D (2009). Testimony Before the Subcommittee on Labor, Health and Human Services, Education and Related Agencies U.S. House of Representatives March 18, 2009. <http://www.clasp.org/publications/ewenappropstestimony.pdf>

⁶⁶ Duncan, et al. op. cit.

⁶⁷ *ibid.*

⁶⁸ Pungello et al., *op cit.*

⁶⁹ Levin HM, Belfield CR (2007) . Educational interventions to raise high school graduation rates. In Belfield CR, Levin HM (eds.) *Price we pay: Economic and social consequences of inadequate education.* Washington, DC: Bookings Institution Press.

⁷⁰ *ibid.*

⁷¹ Quint J, et al. (2005). *The challenge of scaling up educational reform: Findings and lessons from First things First.* New York, NY: MDRC.

⁷² Tsoi-A-Fatt R (2008). *A Collective Responsibility, a Collective Work: Supporting the Path to Positive Life Outcome for Youth in Economically Distressed Communities.* Washington, DC, CLASP. <http://clasp.org/publications/collectiveresponsibility.pdf>

Strawn J (1998)/. *Beyond Job Search or Basic education: Rethinking the Role of Skills in Welfare Programs.* Washington, DC, CLASP. http://www.clasp.org/publications/beyond_job_search.pdf

⁷³ Bettinger E. *How Financial Aid Affects Persistence.* NBER Working Paper No. W10242, 2004. <http://ssrn.com/abstract=492355>

⁷⁴ Kemple JJ. *Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood.* New York: MDRC, 2008.

⁷⁵ CLASP, *CLASP Federal Policy Recommendations for 2009 and Beyond: An Overview,*2008. <http://www.clasp.org/admin/site/publications/files/0436.pdf>

⁷⁶ <http://www.whitehouse.gov/blog/Investing-in-Education-The-American-Graduation-Initiative/>

⁷⁷ Duncan GJ, et al., *op cit.*

⁷⁸ Bhattacharya J, DeLeire T, Currie J (2003). *Heat or Eat? Cold Weather Shocks and Nutrition in Poor American Families.* *American Journal of Public Health*; 93: 1149-54.

⁷⁹ Sherman A (2009). *Safety Net Effective at Fighting Poverty but Weakest for the Very Poor.* <http://www.cbpp.org/cms/index.cfm?fa=view&id=2859>

⁸⁰ *ibid.*

⁸¹ National Employment Law Project (2009), *Federal Stimulus Funding Produces Unprecedented Wave of State Unemployment Insurance Reforms,* , http://www.nelp.org/index.php/site/issues/category/modernizing_unemployment_insurance

⁸² Families USA Foundation (2009). *Squeezed! Caught between Unemployment Benefits And Health Care Costs.* www.familiesusa.org/assets/pdfs/cobra-2009.pdf

⁸³ *Employment Situation Summary, BLS (7/2/09).* <http://www.bls.gov/news.release/empsit.nr0.htm>

⁸⁴ Kaplan GA, Siefert K, Ranjit N, Raghunathan TE, Young EA, Tran D, Danziger S, Hudson S, Lynch JW, and Tolman R (2005). The health of poor women under welfare reform. *American Journal of Public Health*; 95(7):1252-8.

⁸⁵ Goetz EG (2004). The reality of deconcentration. Shelterforce Online, National Housing Institute;138, November/December 2004.

Keels M, Duncan GJ, Deluca S, Mendenhall R, Rosenbaum J (2005). Fifteen years later: Can residential mobility programs provide a long-term escape from neighborhood segregation, crime, and poverty? *Demography*;42(1):51-73.

Popkin S, Katz B, Cunningham MK, Brown KD, Gustafson J, Turner MA (2004) A Decade of HOPE VI Research Findings and Policy Challenges. Washington, DC: Urban Institute.
<http://www.urban.org/publications/411002.html>

⁸⁶ Reid C (2006) . Tackling neighborhood poverty: developing strategic approaches to community development. *Community Investments*:3-11.

⁸⁷ Spencer JH (2007). Neighborhood economic development effects of the Earned Income Tax Credit in Los Angeles. *Urban Affairs Review*;42(6):851-73

Berube A (2006). Using the earned Income Tax Credit to stimulate local economies. Washington: The Brookings Institution. http://www.brookings.edu/reports/2006/11childrenfamilies_berube.aspx

⁸⁸ Berube A (2005). Connecting Cleveland's Low-Income Workers to Tax Credits. Washington: Brookings Institution.

⁸⁹ Cytron N (2008). Strengthening Community Development Infrastructure /The Opportunities and Challenges of CDBG. *Community Investments*, 2008 (Winter).

Walker C, Hayes C, Galster G, Boxall P, Johnson JEH. The Impact of CDBG Spending on Urban Neighborhoods. Washington, DC: Urban Institute, 2002.
<http://www.urban.org/publications/410664.html>

⁹⁰ Katz B (2009). A New Generation of Federal Housing Policy. Presented at "Solutions for Working Families: Conference on State and Local Housing Policy , Center for Housing Policy, National Housing Conference, Chicago, IL. June 29, 2009. <http://www.brookings.edu/experts/katzb.aspx>

⁹¹ Institute of Medicine, Committee on the Consequences of Uninsurance (2002) . Care without Coverage: Too Little, Too Late. Washington, DC: National Academy Press.

⁹² Himmelstein DU, Warren E, Thorne D, Woolhandler S (2005). MarketWatch: Illness And Injury As Contributors To Bankruptcy. *Health Affairs*—web exclusive.
<http://content.healthaffairs.org/cgi/content/full/hlthaff.w5.63/DC1?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=woolhandler&andorexactfulltext=and&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>

⁹³ Himmelstein, DU, Thorne D, Warren E, Woolhandler ES (2009) Medical Bankruptcy in the United States, 2007:Results of a National Study. *American Journal of Medicine*; 122:741-6.

-
- ⁹⁴ McWilliams JM (2009). Health Consequences of uninsurance among adults in the United States: Recent evidence and implications. *Milbank Quarterly*;87:443-494
- ⁹⁵ Baker DW, Sudano JJ, Albert JM, Borawski EA, Dor A (2002). Loss of Health Insurance and the Risk for a Decline in Self-Reported Health and Physical Functioning. *Medical Care*;40:1126-31.
- ⁹⁶ McWilliams JM, Zaslavsky AM, Meara E, Ayanian JZ (2004). Health Insurance Coverage and Mortality among the Near-Elderly. *Health Affairs*;23:223-33.
- ⁹⁷ Kaiser Family Foundation (2009). Low-Income Adults Under Age 65 — Many are Poor, Sick, and Uninsured. <http://www.kff.org/healthreform/7914.cfm>
- ⁹⁸ Kaiser Family Foundation and Health Research and Educational Trust (2008). Employer Health Benefits: 2008 Summary of Findings. <http://ehbs.kff.org/images/abstract/7791.pdf>
- ⁹⁹ Felland LE, Reschovsky JD (2009). More Nonelderly Americans Face Problems Affording Prescription Drugs. Center for Studying Health System Change. Tracking Report No. 22. <http://www.hschange.com/CONTENT/1039/?topic=topic03#ib4>
- ¹⁰⁰ Kaiser Commission on Medicaid and the Uninsured (2009). Expanding Health Coverage for Low-Income Adults: Filling the Gaps in Medicaid Eligibility. <http://www.kff.org/medicaid/7900.cfm>
- ¹⁰¹ *ibid*
- ¹⁰² *ibid*
- ¹⁰³ Pollack H, Kaplan GA, House JS, Schoeni RF (2008). Economic and Social Policy as Health Policy? Chapter 13. Moving Towards a New Approach to Improving Health in America. In House JS, Schoeni RF, Kaplan GA, Pollack H. (eds) *Social and Economic Policy as Health Policy*. New York: Russell Sage.
- ¹⁰⁴ Lindahl M (2002). Estimating the effect of income on health and mortality using lottery prizes as exogenous source of variation in income. Bonn, Germany: Institute for the Study of Labor; 2002 2/2002. Report No.: IZA DP No. 442.
- Costello EJ, Compton SN, Keeler G, Angold A (2003). Relationships between poverty and psychopathology: a natural experiment. *JAMA*;290:2023-29.
- ¹⁰⁵ Case A (2004). Does money protect health status? Evidence from South African Pensions. In: Wise DA (ed.) *Perspective on the Economics of Aging*. Chicago: University of Chicago Press, 287-312.
- ¹⁰⁶ Meer J, Miller DL, Rosen HS (2003). Exploring the health-wealth nexus. *Journal of Health Economics*;22(5), 713-730.
- ¹⁰⁷ Adda J, Banks J, von Gaudecker HM (2009). Adda J Banks J, von Gaudecker HM (2009). The Impact of Income Shocks on Health: Evidence from Cohort Data/ forthcoming, *Journal of the European Economic Association*.
- ¹⁰⁸ Herd P, Schoen RF, House JS (2008). Upstream solutions: Does the supplemental security income program reduce disability in the elderly? *Milbank Quarterly*, 86:5-45.

¹⁰⁹ Singh GK, Siahpush M (2006). Widening socioeconomic inequalities in US life expectancy, 1980–2000. *International Journal of Epidemiology*; 35(4):969-979.

¹¹⁰ King ML Jr. Nobel Prize Lecture, 12/11/1964.
http://nobelprize.org/nobel_prizes/peace/laureates/1964/king-lecture.html

¹¹⁰ Ver Ploeg M, Perrin E, (eds.) 2004. *Eliminating Health Disparities: Measurement and Data Needs*. Panel on DHHS Collection of Race and Ethnicity Data. Committee on National Statistics, Division of Behavioral and Social Sciences and Education. National Research Council of the the National Academies. Washington, D.C.: National Academies Press.

FIGURE REFERENCES

Figure 1: Adapted from Wolfson M, Kaplan G, Lynch J, Ross N, Backlund E. (1999). Relation between income inequality and mortality: empirical demonstration. *BMJ*;319(7215):953-955.

Figure 2: Nepomnyaschy L. (2009) Socioeconomic gradients in infant health across race and ethnicity. *Maternal and Child Health Journal*; online access DOI 10.1007/s10995-009-0490-1/

Figure 3: Bloom B, Cohen RA. (2009) Summary health statistics for U.S. children: National Health Interview Survey, 2007. National Center for Health Statistics. *Vital Health Stat* 10(239).

Figure 4: Miller W. Simon P, Maleque S (eds.) (2009). *Beyond Health Care: New Directions to a Healthier America*. Princeton, NJ: Robert Wood Johnson Foundation.

Figure 5: National Center for Health Statistics (2006) *Health, United States, 2006* With Chartbook on Trends in the Health of Americans. NCHS: Hyattsville, MD.

Figure 6: Rouse ER, Barrow L. (2006) U.S. Elementary and Secondary Schools: Equalizing Opportunity or Replicating the Status Quo? *Future of Children*;16:99-123.

Figure 7: National Center for Education Statistics, *Digest of Education Statistics*,
http://nces.ed.gov/programs/digest/d07/tables/dt07_106.asp

Figure 8: Moore LV, Diez Roux A (2006). Associations of Neighborhood Characteristics With the Location and Type of Food Stores. *American Journal of Public Health*; 96:325-31.

Figure 9: National Center for Education Statistics. Calories in, calories out: Food and exercise in public elementary schools (2005). *Fast Response Survey System (FRSS 2005)*: May 2006.

Figure 10: Heymann J (2002). Can Working Families Ever Win? Helping parents succeed at work and caregiving. <http://bostonreview.net/BR27.1/heyman.html>

Figure 11: DeNavas-Walt C, Proctor BD, Smith, J (2007). U.S. Census Bureau, *Current Population Reports, P60-233, Income, Poverty, and Health Insurance Coverage in the United States: 2006*, U.S. Government Printing Office, Washington, DC.