

Poverty and poor health: Can health care reform narrow the rich-poor gap?

Barbara Wolfe

Barbara Wolfe is Professor of Economics, Public Affairs, and Population Health Sciences at the University of Wisconsin–Madison and an IRP affiliate. She delivered the annual Robert J. Lampman Memorial Lecture at Madison in June 2011. This article is adapted from her lecture.

Robert (Bob) Lampman’s work on the reduction of income poverty in the United States is well-known. Less well-known, however, are his contributions to the economics of health and health care. In some of Lampman’s early work from the mid-1960s, he pointed to the gap in utilization of medical care between the poor and those with higher incomes. He also wrote on employment in the health care sector and the positive role it played during recessions, although he presciently warned that excessive growth would likely result in spiraling health care expenditures. Today, this sector operates as an important economic engine; over 14 million people, or 11 percent of the nation’s workforce, are employed in health care, up from 9.5 percent at the start of the recent recession.¹ A large number of jobs in this growing industry go to lower-skill workers. In a 1969 paper, Lampman pointed out the rapid growth in health care costs, and the political and economic limits of privately provided health insurance. He also raised questions about how to secure better health for more people, such as through more insurance, more direct investments in medical personnel, or perhaps through direct income transfers. He recommended that any proposed health care plan be confronted with a question that came to be associated with Lampman’s name: “What does it do for the poor?”

Lampman’s views in this area have as much salience today as they did then. Indeed, for the better part of the last four years, these very issues have been debated in the United States, with researchers and policymakers asking: How do we control health care costs while providing access to care and improving health among the poor? In this article, I extend Lampman’s concern with the health care sector with a focus on the 2010 Affordable Care Act (ACA). Among other questions, I pose Lampman’s big question. I believe that the creators of the health care reform bill would be graded positively by Bob Lampman, as the (often overlooked) pro-poor impacts of this legislation are perhaps its most important components.

I begin by presenting evidence of the link between poor health and poverty in the United States, and reviewing the sources and patterns of this connection. I then review the details of the 2010 health care reform, and assess its potential for improving access to health care for the poor, and for reducing the rich-poor gap in health and mortality.

Poverty and poor health in the United States

It has been well established that income inequality and poverty in the United States are high and continue to increase, especially since 2000.² There is also empirical evidence of a link between poor health and poverty. Figure 1 shows the proportion of individuals (or, in the case of children, their parents) self-reporting “poor” or “fair” general health, by age group and income quintile. For every age group, those with lower incomes tend to report poorer health, and the difference increases over time until the age group right before Medicare eligibility. For the age group that is eligible for Medicare, poor or fair health decreases for the lowest income quintile, thus somewhat narrowing the gap. Part of the explanation for this change is likely selective mortality; a greater proportion of the people in the poorest health may have died before reaching the oldest age bracket.

The connection between income and mortality can also be measured directly; a study that looked at odds ratios for three-year mortality at the end of each of three decades found that those in the lowest income quartile consistently had higher mortality rates, and that the gap widened over time, even as overall mortality rates declined. At the end of the 1970s, those in the lowest income quartile had mortality rates 1.89 times as high as those in the highest income quartile; by the end of the 1990s, this ratio had increased to 2.66.³ Together, this research shows that those with higher incomes tend to have better health and live longer. In the next section, I examine the patterns of the health gap.

Income–health gradient patterns: Evidence based on children

Children are the focus of much of the research on the income–health gradient. For adults, poor health may result in lower income because of lower productivity, thus making it harder to isolate the effects of income on health. In contrast, since children do not influence the income level of a family to the extent that adults do, it is easier to determine causal effects. Studies have been done in many developed countries with the same general results. As family income increases, the proportion of families reporting poor health declines. Additionally, the decline in health by income becomes steeper as children age, suggesting the cumulative effect of poverty.⁴

The effects of income on health are illustrated in a study I am doing with Jason Fletcher, where we look at income–health gradients for children observed from kindergarten through eighth grade.⁵ Our data include repeated measures of both family and neighborhood income, as well as birth weight (which permits us to control for initial health). We find, for

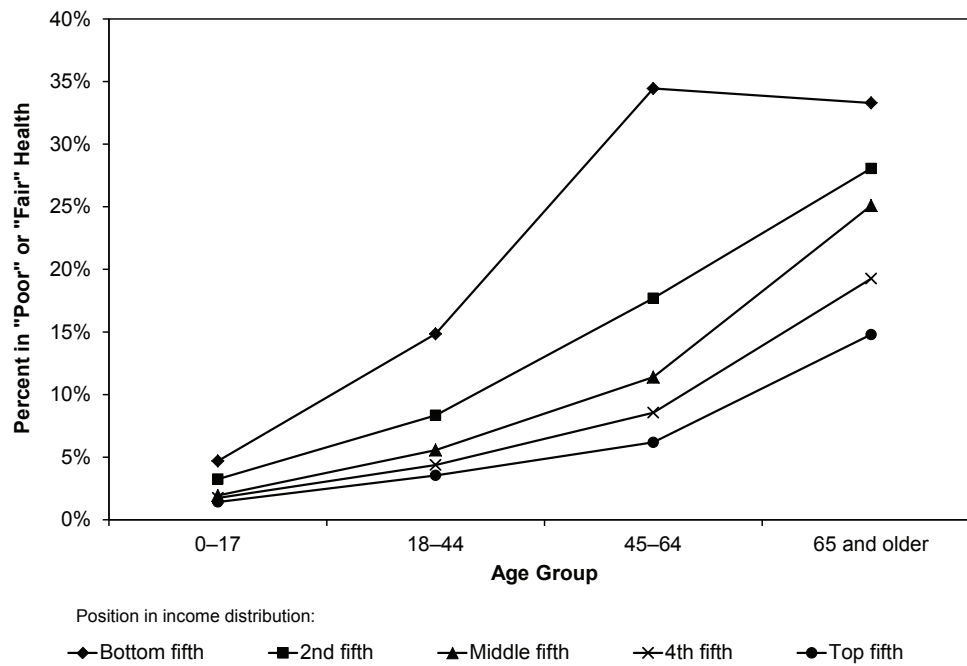


Figure 1. Health status, age, and income, 1996–2005.

Source: G. Burtless and P. Svaton, "Health Care, Health Insurance, and the Distribution of American Incomes," *Forum for Health Economics & Policy* 13, No. 1 (2010): Article 1.

example, that family income has a positive effect on child health, and the effects are cumulative as the child ages. We also find that neighborhood income, as measured by the average income of the families of the children in each child's school, has little influence on the relationship between family income and child health.

Life course studies

Another way to look at the relationship between income and health is to do a life course study. There are two basic approaches to this type of study: to follow a birth cohort over time, or to trace individuals that grew up in a particular location using official death records. One such study, of a British birth cohort from the mid-1940s, found that poor socioeconomic conditions during early life predict a variety of illnesses later in life, including hypertension and schizophrenia.⁶ Another birth cohort study in the United Kingdom found that childhood socioeconomic conditions are an important predictor of life expectancy, and that poor housing conditions during childhood are associated with reduced longevity.⁷ This difference can be partly explained by greater prevalence of diseases during early childhood among lower-income families.

Fetal origins literature

Another set of studies looks at disparities that begin even before birth, in utero. Much of the early work in this fetal origins literature looked at animals, but some more recent studies have looked at periods of extreme hardship in human populations. The core idea behind these studies is that the health of an embryo depends on a steady supply of nutrients and oxygen; that the second trimester is a particularly criti-

cal period of development; and that if a fetus does not have the appropriate level of nutrients or oxygen, it will protect development of the brain over the body. Studies have found that this fetal growth restriction is associated with a number of illnesses in adulthood, including type 2 diabetes, coronary heart disease, hypertension, and stroke.⁸

In order to do a fetal origins study, researchers have chosen a short period that is substantially different from surrounding years. Work mainly done in the Netherlands has found that those born during recessions have mortality rates after the first year of life that are up to 7 percent higher than for those born just prior to, or just after, the recession period.⁹ One of the best-known studies of this type looked at the Dutch famine in the winter of 1944 to 1945. By middle age, those born during that period had poorer self-reports of general health than those born outside the famine period, as well as higher rates of coronary heart disease and antisocial personality disorder.¹⁰ Another study that looked at psychological consequences of fetal conditions found that those whose second trimester fell during Israel's June 1967 war were significantly more likely to develop schizophrenia as young adults.¹¹ An ongoing study in China is even finding an echo effect; that is, periods of deprivation have an effect not just on children born during that period, but also on *their* children. Results of this study show that women born during periods of famine are more likely to have children with birth defects than are women born just before or after that period.¹²

There is some evidence that health care can have a mitigating effect on the implications of fetal origins. For example, a study compared children who were born to obese mothers

before and after having anti-obesity surgery. Children born to the same mother after the surgery were 52 percent less likely to be obese than their siblings born before the surgery.¹³ The evidence suggests the surgery changed the metabolism of the mother, and thus the experience of the fetus. The implication is that health intervention may have a positive role in influencing the health status of the next generation.

Biological pathways and poverty

Another example of how health care can reduce the effects of poverty on health comes from a study of socioeconomic status and asthma. Looking at a group of children who had been diagnosed with asthma, researchers found that those with a lower socioeconomic status were more likely to have intense asthma reactions that required hospitalization. In an effort to discover the reason for this differential response, children were shown a video depicting a social situation that was ambiguous, and that could be interpreted in a benign or threatening way. Children with a lower socioeconomic status were more likely to choose the more threatening interpretation; feeling threatened is likely to increase the intensity of the asthma response.¹⁴ Researchers also found that an intervention aimed at adding more routines into family life could reduce feelings of threat, and thus ameliorate asthma symptoms.

I am currently involved in a project with Jamie Hanson, Seth Pollak, and others, that aims to look at the mechanisms through which income can affect health. Specifically, we are analyzing whether there is any evidence that growing up in a poor family leads to a different pattern of growth in the brain in regions that affect health and cognitive ability. The first published paper for this project looks at the relationship between income and the hippocampus, an area of the brain that affects learning and memory. The results show that children from lower income backgrounds had lower hippocampal gray matter density; the differences were observable at birth, and also appear to increase as children age.¹⁵

Summary of connection between income and health

Research has shown that those with low incomes also tend to have relatively poor outcomes for health and mortality, compared to those with higher incomes. The gap appears to begin prior to birth, and then increase throughout childhood. It appears that without policy interventions to mitigate the consequences of poverty and inequality for health, the gap in health between the poor and rich in the United States will continue. While the 2010 health care reform has received attention primarily because of included mandates and perceived costs, I believe that it does have the potential to improve access to health care for the poor, and consequently to reduce the health and mortality gap. The next section looks at this reform in more detail.

Health care reform in the United States

There are a number of problems that the 2010 health care reform was designed to address:

- *Lack of insurance coverage:* 50 million people, over 15 percent of the U.S. population, are uninsured. As one would expect, low-income individuals are disproportionately represented in this number; nearly 70 percent of the uninsured are poor or near-poor. Public coverage for low-income populations also varies greatly by state. Finally, insurance options available to people with preexisting health conditions tend to be limited and expensive.
- *Lack of access to care:* Many people go without health care, especially preventative care, either because they lack insurance or cannot afford high out-of-pocket costs required by their plan. There are also numerous underserved areas where access to care may be limited; these are most likely to be in low-income and rural areas. Access issues disproportionately affect the poor; the probability of a poor child going without any health care in a year is more than twice that for a child in a higher income household.
- *Other issues:* The non-group private insurance market does not currently function well; those who do not obtain insurance through their employer or the public sector are likely to face limited provider options, high costs, and incomplete coverage. As frequently reported, health care costs in the United States are high and rising; health care costs currently account for over 16 percent of GDP, or more than \$8,000 per capita. A final issue is regressive financing and excessive coverage. U.S. federal tax policy currently permits individuals to pay for health insurance premiums with pre-tax dollars, resulting in foregone tax receipts. This benefit goes disproportionately to those in the highest income brackets.

The Affordable Care Act

Health care reform in the United States was enacted in 2010 in two bills, which I collectively refer to as the Affordable Care Act (ACA).¹⁶ Major provisions of the ACA are described below.

Increasing coverage

The ACA includes a number of provisions specifically intended to reduce the number of uninsured. Medicaid will be expanded to cover those with incomes up to 133 percent of the federal poverty line by 2014, whether they have children or not. Insurance subsidies will be provided to those with incomes up to 400 percent of the federal poverty line. One change already in place is that children are eligible to remain on their parents' plan up to the age of 26. There are also tax credits to assist small firms with low-wage employees to provide health insurance, and penalties to large firms if they do not offer coverage. Employees who are eligible for health insurance will be enrolled automatically unless they choose to opt out. Health insurance coverage will also be increased by prohibiting preexisting condition exclusions and surcharges (already in place for children).

Increasing access

If there is a lack of health care providers in a particular geographic area, or if high copayments make obtaining care

cost-prohibitive, then simply expanding health insurance coverage will not necessarily increase access to health care. The ACA thus includes provisions to increased access by capping copayments and by eliminating annual and lifetime maximums, as well as prohibiting cancellation of coverage due to a new condition. Several strategies will be used to increase the number of available providers, including increasing primary care provider compensation under Medicaid, and giving attractive student loan terms to medical providers who pledge to go into primary care and to nurses who pledge to work for public or nonprofit organizations. Some funding will also be available for pilot projects and other experimentation aimed at improving access for those with language or literacy constraints.

One strategy for providing more care options in underserved areas is to increase the number of Community Health Centers (CHCs). CHCs have already proven to be a successful way to provide care to the underserved, thus building on this existing resource is a reasonably straightforward way to increase access. There are currently 8,000 CHCs in the United States serving 23 million people each year. The ACA calls for CHCs to serve 40 million people, with associated funding increases to facilitate this expansion of care. Financial incentives will also be made available to providers who choose to locate or serve in areas designated as underserved.

Unequal access is a particular issue for dental care, more than for general health care. The ACA addresses the oral health care gap in three ways: by easing licensing restrictions in order to enable preventive care to be provided by trained paraprofessionals; mandating Medicaid to provide oral health coverage for children; and providing funding to train additional dentists.

Addressing other health care issues

There are provisions in the ACA intended to address the other problems identified above. The health insurance market will be improved, particularly the nongroup market, through the establishment of exchanges, definition of standard packages, and improved information on options available within the exchange. There will be new quality incentives, and pilot programs intended to improve efficiency. Regressive tax expenditures will be capped. Some of the financing mechanisms for Medicare will be modified; these changes may reduce the use of overpriced capitated care (Medicare Advantage plans), influence the availability of providers, and expand pharmaceutical coverage.

Lessons learned from Massachusetts

Health care reform in Massachusetts, enacted in 2006, is often characterized as a pilot for national reform. Most Massachusetts citizens are now mandated to have health insurance. Employers with more than 10 full-time employees are required to offer a health insurance plan, and also to make a contribution towards the cost of health insurance premiums. Medicaid in Massachusetts was expanded to provide coverage up to 300 percent of the federal poverty line. For

lower-income families, private purchase of health insurance is subsidized by the state. Health insurance exchanges have been established in order to organize and sell alternative plans. Finally, older children must be covered under their parents' plan for two years after they become independent, up to the age of 25.

Three years after full implementation in 2008, Massachusetts has the lowest uninsured rate in the United States. The uninsured rate among the poor has dropped by half, from 21 percent to 10 percent. The rate of coverage for children is near 100 percent. Positive outcomes of the reform are observable in a number of areas. The level of uncompensated care borne by hospitals has fallen by more than one-third, without an accompanying drop in indicators of hospital performance. Emergency admissions have been greatly reduced, and a higher percentage of families now have a regular health care provider. Although there have been substantial public sector costs associated with expansion, nearly one-half of those costs have been offset by a reduction in state safety net and uncompensated costs.

The results in Massachusetts have been largely positive—can nationwide health care reform achieve similar outcomes? More specifically, in doing so can the gap between rich and poor in health and life expectancy be narrowed? I address these questions in the next section.

Will changes in U.S. health care reduce disparities?

There are a number of improvements that should clearly be achieved by implementation of the ACA. For example, coverage for low- and moderate-income individuals should be increased, and coverage for young adults should be improved. Implementation will improve access to health care for low- and moderate-income families, as well as for those in underserved areas. Provisions for pilot programs and experimentation should help to identify both effective and ineffective health care strategies. Finally, some provisions are explicitly intended to reduce income-based disparities. Despite these improvements, the question remains: Will these changes reduce the rich-poor health and mortality gap?

Evidence of effects of increased insurance coverage

Some existing research provides evidence as to whether and how much the health and mortality gap might be reduced by implementation of provisions of the ACA.

Overall effects of having insurance

There are several studies that illustrate the link between health insurance status and health and mortality, but that do not focus specifically on the poor. A study done in 24 hospitals found that those without health insurance were about 40 percent more likely to delay seeking care after experiencing symptoms later diagnosed as a myocardial infarction (heart attack).¹⁷ Myocardial infarction is a condition where even a

few hours of delay can have important effects on health and mortality, and also one that affects a large number of people; nearly a million people annually in the United States suffer a heart attack. Thus, having insurance in this case has a positive effect on health. Similarly, some limited evidence for those who go on Medicare at age 65 after being previously uninsured shows improved health for those with certain health conditions such as diabetes and some cardiac issues.¹⁸

Another study found a link between insurance coverage and subsequent mortality. Using national data and controlling for a large number of factors affecting health, researchers found that nonelderly adults without insurance were forty percent more likely to die in the six to twelve years following study entry than were those who had insurance.¹⁹

Effects of insuring the poor on the mortality gap

While the above studies do provide evidence of a link between insurance and mortality, they do not focus specifically on the poor. In order to estimate the potential effect of insuring all poor prime-age adults on the rich-poor mortality gap, I used national insurance data linked to death certificates. The results for men are shown in Figure 2A, and for women in Figure 2B. For men, the drop in mortality if all nonelderly individuals in the United States were to be insured is most evident for poor men aged 31 to 47. There is little gain for those with higher incomes, where health risks are lower, and where the proportion who already has insurance is higher. For women, the potential gain is also greatest for the poorest group. While these results are only suggestive of the possible effects of the ACA, they do provide hope for the potential of health improvement among those with the lowest incomes, once health insurance coverage is expanded.

Evidence that expansion of community health centers will reduce gap

Community Health Centers are well positioned to reduce the health and mortality gap. These centers are more likely to accept poor and minority patients than other health care providers, and also provide more preventive care than other settings.²⁰ Researchers have found that those living in areas served by a Community Health Center were more likely than those in other areas to have a usual source of care.²¹ Recent work by Bailey and Goodman-Bacon found that Community Health Centers reduced age-adjusted mortality rates by nearly 2 percent over 10 years for those age 50 or older. The effects are large enough to explain up to one-quarter of the 1966 rich-poor mortality gap for this age group.²²

Are reforms likely to reduce the health gap for children?

There have been a number of studies that suggest that reforms implemented as part of the ACA will reduce the rich-poor gap in children's health. For example, there is evidence that health care coverage improves prenatal care, thus reducing infant mortality and low birth weight; reduces avoidable hospitalizations of children; and increases the probability that children will receive recommended immunizations.²³ Diette and colleagues found that treatment of chronic conditions

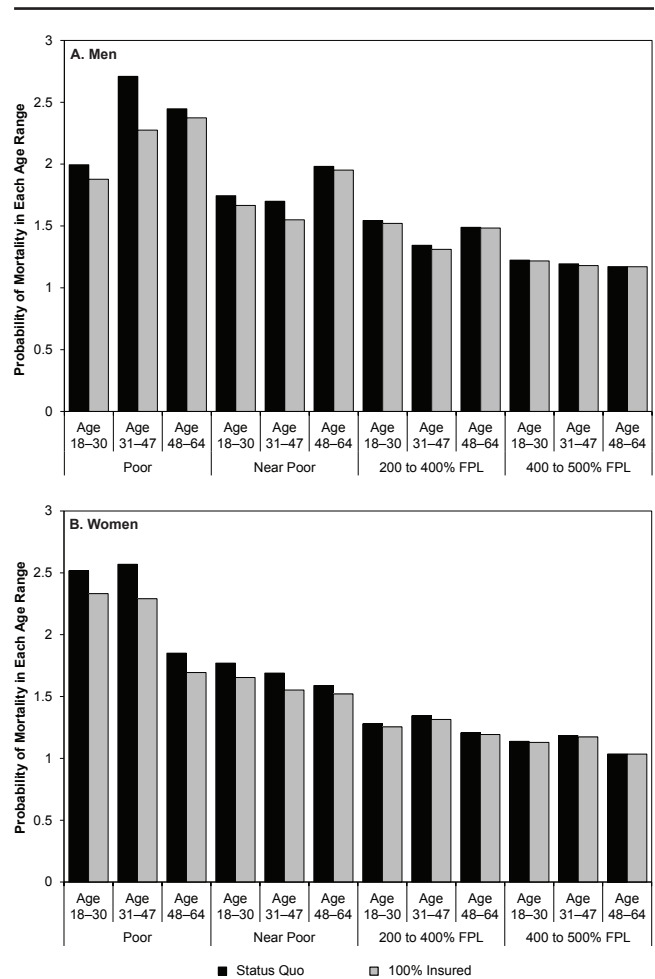


Figure 2. The Potential of Insurance to Reduce the Rich-Poor Mortality Gap among Nonelderly Men and Women.

Source: NHIS data matched to the National Death Index, estimates by Nicole Hair.

improves school attendance, while Levine and Schazenbach found that greater access to public health insurance at birth improved children's performance on standardized reading tests.²⁴ Taken together, these studies suggest that health care reform is likely to improve outcomes for poor children, and thus narrow the health gap.

Can we afford ACA programs for the poor?

While the ACA does come with a large price tag, there are a number of expected effects of the reforms that should mitigate costs. The plan is expected to decrease uncompensated care, the cost of which must be borne somewhere in the health care system. Implementation of the ACA should also reduce some components of medical spending through prevention, increased access, and early detection of disease. It is also possible that the implementation of medical homes policies, which will provide care for chronically ill individuals with conditions such as asthma and diabetes, will avoid unnecessary and duplicative care and reduce avoidable hospital stays. Incentives to improve the quality of care should also limit costs. Finally, some longer-run gains to the economy can be expected. For example, poor pregnant women and

new mothers who are served by visiting nurses are expected to smoke less and improve their nutrition, so that their children will be healthier and have better long-term outcomes.

Conclusion

In assessing the potential of health care reform, Bob Lampman would have asked, “What does it do for the poor?” By that standard, I believe that the ACA can be judged very positively. There is currently a significant rich-poor gap in health and mortality in the United States. I have presented evidence showing the links between health and poverty, and some of the potential ways in which the ACA is likely to reduce health disparities. This reduction has the potential to improve long-term outcomes for the poor, including increasing possible earnings. Thus, I believe that this reform does a great deal for the poor, and is an important new program in the fight against poverty. ■

¹See <http://www.bls.gov/oco/cg/cgs035.htm>.

²Organisation for Economic Co-operation and Development, “Growing Unequal? Income Distribution and Poverty in OECD Countries,” OECD, 2008. Available at <http://www.oecd.org/els/social/inequality/GU>.

³B. Wolfe, B., W. Evans, and N. Adler, “The SES and Health Gradient—A Brief Review of the Literature,” in *Biological Consequences of Socioeconomic Inequalities*, eds. B. Wolfe, W. Evans, and T. Seeman (New York: Russell Sage Foundation, Forthcoming).

⁴See, for example, A. Case, D. Lubotsky, and C. Paxson, “Economic Status and Health in Childhood: The Origins of the Gradient,” *The American Economic Review* 25, No. 4 (2002): 1308–1334.

⁵J. Fletcher and B. Wolfe, “Increasing Our Understanding of the Health-Income Gradient,” unpublished manuscript, 2011. Available at: go.wisc.edu/pbne3e.

⁶M. E. J. Wadsworth and D. J. L. Kuh, “Childhood Influences on Adult Health: A Review of Recent Work from the British 1946 National Birth Cohort Study, the MRC National Survey of Health and Development,” *Paediatric and Perinatal Epidemiology* 11, No. 1 (1997): 2–20.

⁷P. Frijters, T. Hatton, R. M. Martin, and M. A. Shields, “Childhood Economic Conditions and Length of Life: Evidence from the UK Boyd Orr Cohort, 1937–2005,” *Journal of Health Economics* 29, No. 1 (2010): 39–47.

⁸D. J. Barker, “The Origins of the Developmental Origins Theory,” *Journal of Internal Medicine* 261, No. 5 (2007): 412–41.

⁹G. J. van den Berg, M. Lindeboom, and F. Portrait, “Economic Conditions Early in Life and Individual Mortality,” *American Economic Review* 96, No. 1 (2006): 290–302.

¹⁰T. Roseboom, S. de Rooij, and R. Painter, “The Dutch Famine and its Long-Term Consequences for Adult Health,” *Early Human Development* 82, No. 8 (2006): 485–491.

¹¹D. Malaspina, C. Corcoran, K. R. Kleinhaus, M. C. Perrin, S. Fennig, D. Nahon, Y. Friedlander, and S. Harlap, “Acute Maternal Stress in Pregnancy and Schizophrenia in Offspring: A Cohort Prospective Study,” *BMC Psychiatry* 2008, 8: 71. doi:10.1186/1471-244X-8-71

¹²D. Almond, L. Edlund, H. Li, and J. Zhang, “Long-Term Effects of the 1959–1961 China Famine: Mainland China and Hong Kong,” Working Paper 13384, National Bureau of Economic Research: Cambridge, MA, September 2007. Available at: <http://www.nber.org/papers/w13384>.

¹³J. G. Kral, S. Biron, S. Simard, F. Houuld, S. Lebel, S. Marceau, and P. Marceau, “Large Maternal Weight Loss From Obesity Surgery Prevents Transmission of Obesity to Children Who Were Followed for 2 to 18 Years,” *Pediatrics* 118, No. 6 (December 1, 2006): e1644–e1249.

¹⁴E. Chen, M. D. Hanson, L. Q. Paterson, M. J. Griffin, H. A. Walker, and G. E. Miller, “Socioeconomic Status and Inflammatory Processes in Childhood Asthma: The Role of Psychological Stress,” *Journal of Allergy and Clinical Immunology* 117, No. 5 (2006): 1014–1020.

¹⁵J. L. Hanson, A. Chandra, B. L. Wolfe, and S. D. Pollak, “Association between Income and the Hippocampus,” *PLoS ONE* 6, No. 5 (2011): e18712. doi:10.1371/journal.pone.0018712

¹⁶The Patient Protection and Affordable Care Act became law on March 23, 2010, and was shortly thereafter amended by the Health Care and Education Reconciliation Act of 2010 (H.R. 4872), which became law on March 30, 2010.

¹⁷K. G. Smolderen, J. A. Spertus, B. K. Nallamothu, H. M. Krumholz, F. Tang, J. S. Ross, et. al., “Health Care Insurance, Financial Concerns in Accessing Care, and Delays to Hospital Presentation in Acute Myocardial Infarction,” *Journal of the American Medical Association* 303, No. 14 (2003): 1392–1400.

¹⁸J. M. McWilliams, E. Meara, A. M. Zaslavsky, and J. Z. Avanian, “Health of previously uninsured adults after acquiring Medicare coverage,” *Journal of the American Medical Association* 298, No. 24 (2007): 2886–2894.

¹⁹A. P. Wilper, S. Woolhandler, K. E. Lasser, D. McCormick, D. H. Bor, and D. U. Himmelstein, “Health Insurance and Mortality in US Adults,” *American Journal of Public Health* 99, No. 12, (December 2009): 2289–2295.

²⁰L. Shi and G. Stevens, “The Role of Community Health Centers in Delivering Primary Care to the Underserved: Experiences of the Uninsured and Medicaid Insured,” *Journal of Ambulatory Care Management* 30, No. 2 (April–June 2007): 159–170.

²¹J. Hadley and P. Cunningham, “Availability of Safety Net Providers and Access to Care of Uninsured Persons,” *Health Services Research* 39, No. 5 (October 2004): 1527–1546.

²²M. J. Bailey and A. Goodman-Bacon, “The War on Poverty’s Experiment in Public Medicine: Community Health Centers and the Mortality of Older Americans,” unpublished manuscript, 2011. Available at: http://www-personal.umich.edu/~baileymj/Bailey_Goodman-Bacon.pdf.

²³For prenatal care study, see J. Currie and J. Gruber, “Health Insurance Eligibility, Utilization of Medical Care, and Child Health,” *Quarterly Journal of Economics* 111, No. 2 (1996): 431–466; for hospitalization reduction see L. Dafny and J. Gruber, “Public Insurance and Child Hospitalizations: Access and Efficiency Effects,” *Journal of Public Economics* 89, No. 1 (2005): 109–129; and for increased immunization see T. Joyce and A. Racine, “CHIP Shots: Association Between the State Children’s Health Insurance Programs and Immunization Rates,” *Pediatrics* 115, No. 5 (May 1, 2005): e526–e534.

²⁴G. B. Diette, L. Markson, E. A. Skinner, T. T. H. Nguyen, P. Algatt-Bergstrom, and A. W. Wu, “Nocturnal Asthma in Children Affects School Attendance, School Performance, and Parents’ Work Attendance,” *Archives of Pediatric and Adolescent Medicine* 154, No. 9 (September 2000): 923–928; P. B. Levine and D. Schanzenbach, “The Impact of Children’s Health Insurance Expansions on Educational Performance,” *Forum for Health Economics & Policy* 12, No. 1 (2009): Article 1.