

# BAKER INSTITUTE POLICY REPORT

PUBLISHED BY THE JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY OF RICE UNIVERSITY

NUMBER 40



JUNE 2009

## THE ECONOMIC IMPACT OF UNINSURED CHILDREN ON AMERICA

America, unlike most other developed countries, does not provide universal health insurance coverage for its population. We reviewed the medical and social science literature to examine the evidence regarding the economic impact of failing to insure all children in the United States. We defined “economic consequences” broadly to obtain the most comprehensive picture of how children’s health insurance affects the country’s current and future well-being. We relied mostly on studies published in peer-reviewed journals to increase our confidence that the analyses had undergone critical review by informed experts. Studies published by the Institute of Medicine, which undergo independent review in accordance with National Research Council procedures, were also analyzed. In some cases, we refer to studies that were not published in peer-reviewed journals, but contain detailed analyses of data that we had not seen elsewhere. We summarize our main conclusions below:

- Health care expenditures for uninsured children are 47% lower than for insured children. Uninsured children are more likely to have gone without needed medical, dental, or other health care; and they are more likely to rely on the emergency room as their usual source of care.
- Studies indicate that lack of health insurance coverage for children leads to poorer health in childhood, greater rates of avoidable hospitalizations, and higher childhood mortality.
- While no studies have examined the association between childhood health insurance status and adult outcomes, better health in childhood has been linked in adulthood to higher incomes, higher wealth, more weeks worked, and a higher growth rate in income. Given that the earnings differential in adulthood between healthy versus unhealthy childhood siblings can be as much as 24%, the long-term labor force impact of being uninsured as a child may be significant.
- A previous study estimates the present value at birth of lifetime health capital lost due to lack of children’s health insurance is \$15,572 for each male and \$11,646 for each female. Health capital was valued based on both the quality and length of life for insured and uninsured children. A separate study suggests that the cost of providing health insurance to each uninsured child through age 18 is \$7,451 in current dollars. Thus, the costs of covering children with health insurance could be offset by the value of future health capital gained.
- A study published in 2008 estimated the cost of expanding health insurance coverage to all children to be \$9.6 billion in 2009. This amount is relatively small, compared to the estimated additional costs of \$112.9 billion that would be required to cover uninsured adults. The \$9.6 billion figure is also relatively small compared to total national health expenditures, which were estimated to reach \$2.4 trillion in 2008.
- Past research indicates that providing health insurance to low-income children and pregnant women increased spending on other consumer goods by the equivalent of approximately \$800 per family per year in 2009 dollars. Boosting consumer expenditures for these families by such a sizable amount in the midst of the current contraction in consumer spending would contribute significantly to a broad-based economic recovery.

We conclude that providing health insurance to all children in America will yield substantial economic benefits. Universal coverage for children will increase health care expenditures, but by a relatively small amount. Providing uninsured children with coverage will lead to higher quality health care for these children, which will significantly improve their productivity as adults. The cost of health insurance for children will be offset by the increased value of additional life years and improved health-related quality of life gained from improved health care. In fact, from a societal perspective, universal coverage for children appears to be cost saving.

### COMPARING THE UNITED STATES TO OTHER COUNTRIES

The United States, unlike most other developed countries, does not provide universal health insurance coverage for its population. In fact, the United States ranks third highest among 30 Organisation for Economic Co-operation and Development (OECD) countries in the percentage of the population lacking health insurance, with one in seven people uninsured (see Figure 1). Eighteen countries provide universal coverage, and for most countries without universal coverage, the uninsured rate is less than 3%.

The lack of health insurance coverage for so many Americans cannot be attributed to lower health care spending in the United States. Instead, we lead all other countries in health care spending per capita. This higher spending forces private companies to raise premiums, so that health insurance is becoming increasingly unaffordable to more Americans. Figure 2 illustrates the close association between higher health care spending per capita and the rising share of the uninsured population in the United States over the past decade. Moreover, the higher spending per capita in the United States does not appear to yield incremental health benefits when compared to other countries. Figure 3 graphs life expectancy for OECD countries against their health spending per capita. The United States is markedly worse than other developed countries in terms of life span achieved per dollar directed toward health care.

Relative to the adult population, the United States has had somewhat better success at insuring children. Although rates of uninsurance for all persons under

65 rose continually in the last decade, uninsured rates for children have fallen from 12.5% in 1999 to 11.0% in 2007 (see Figure 4). Medicaid provides much-needed health insurance coverage to low-income children, and the establishment of the State Children's Health Insurance Program (SCHIP) in the 1990s provided additional coverage to children who met federal and state-specified income and eligibility requirements.

Nevertheless, the percentage of uninsured children in the United States has remained above 10% in the past decade and amounts to 8,149,000 uninsured in 2007. This figure masks even higher rates of uninsured children in many parts of the country. Figure 5 graphs the percentage of uninsured children by state in 2007. Texas reported the highest percentage of uninsured children (21.4%), followed closely by Florida (19.2%) and New Mexico (15.5%). Some individuals might argue that the reported rates of uninsured children in the United States are artificially high. That is, most low-income children are relatively healthy and do not need to enroll in Medicaid unless they become severely ill. This reasoning suggests that in terms of health, the current rates of uninsured children may be "acceptable." However, the American Academy of Pediatrics (AAP) recommends at least one visit per year for preventive care for all children, even through adolescence. Research indicates that only 35.3% of uninsured children in the United States were in compliance with the AAP recommended guidelines for well-child visits.<sup>1</sup>

Researchers and policymakers have become concerned about the long-term consequences of lack of insurance coverage for children. For example, the poor ranking of the United States among OECD countries in terms of health insurance coverage is matched by its relatively high infant mortality rate. The infant mortality rate in the United States is 28% higher than the OECD average, and it ranks eighth highest among the 37 countries in Figure 6. However, a correlation between high rates of uninsured children and relatively high infant mortality rates does not necessarily imply causation. One could argue that high infant mortality rates and lower life expectancy in the United States are equally attributable to other factors, such as a more heterogeneous population or unhealthy lifestyle choices. If lack of insurance does not causally influence future outcomes, then directing resources toward implementing universal health insurance in the United

States would not yield measurable economic benefits to individuals or society.

### THE IMPACT OF HEALTH INSURANCE ON HEALTH CARE UTILIZATION

We begin our review of the research literature with an examination of the impact of children's health insurance on health care expenditures. A recent study conducted for the Kaiser Commission on Medicaid and the Uninsured analyzed data from the 2002–2004 Medical Expenditure Panel Surveys (MEPS). The MEPS is a nationally representative household survey of the civilian, noninstitutionalized population, and more than 102,000 people were interviewed in the 2002–2004 annual surveys. The analysis indicated that children without health insurance for a full year were estimated to receive only \$1,076 worth of health care in 2008, compared to \$2,035 for children who were insured throughout the year—a 47% difference. In addition, uninsured children paid a higher percentage (30%) out-of-pocket for the care they received, compared to 21% for the privately insured.<sup>2</sup> As one would expect, children insured for part of the year received 50% more care (\$1,556) than children who were without coverage the entire year. However, this amount is 21% less than children insured all year, even though most of the care received was while insured.

In principle, the expenditure disparities between insured and uninsured children reflect differences in both the price and quantity of medical care consumed by these groups. Thus, uninsured children might be receiving medical services that are comparable to the insured, but at lower prices. However, an examination of the literature indicates that uninsured children do indeed receive fewer health care services compared to the insured.

In a study of approximately 50,000 children under 18 years of age from the 1993–1994 National Health Interview Survey (NHIS), uninsured children were less likely than insured children to have a usual source of care (75.9% versus 96.2%).<sup>3</sup> Having a usual source of care, or medical home, has been associated with several favorable outcomes, including earlier diagnosis, fewer hospitalizations, lower costs, and increased patient satisfaction.<sup>4</sup> Compared to insured children, uninsured children are also more likely to be without access to medical care after normal

business hours (11.8% versus 7.0%) and to have gone without needed medical, dental, or other health care (22.1% versus 6.1%). Similarly, uninsured children were less likely to have seen a physician during the previous year than children with health insurance (67.4% versus 83.8%).

Lack of insurance can also mean a delay in care and prescriptions that go unfilled. Using data from the 2000 and 2001 National Health Interview Surveys, the authors of a study published in 2005 showed that medical care was delayed for 15.9% of children who had been uninsured for a year, compared with 1.5% of privately insured children. Prescriptions for 10.0% of children without insurance for a year went unfilled, compared with 1.0% of privately insured children.<sup>5</sup>

A comparison of the use of specific medical services for insured versus uninsured children yields similar conclusions. For example, a study of 965 children with acute asthma who were treated in emergency departments found that uninsured children consistently received lower quality of care than insured children. Uninsured children were more likely to rely on the emergency room as their usual source of care and source of asthma prescriptions, and had lower access to a primary care physician or a written set of instructions for addressing asthma attacks at home.<sup>6</sup>

Researchers who specifically tracked children with common childhood maladies such as sore throat and ear infections found that those lacking health insurance were “less likely to receive medical care from a physician when it seems reasonably indicated.” Examining data from the 1987 National Expenditure Survey, the authors showed that 63.4% of uninsured children with pharyngitis (defined as “a sore throat with high fever or tonsillitis for at least 2 of the preceding 30 days”) were not seen by a physician, compared with 42.1% of insured children.<sup>7</sup> Thirty-three percent of uninsured children with recurrent ear infections didn't see a doctor, compared with 14.9% of insured children.

The RAND Health Insurance experiment, which randomized approximately 2000 families to different levels of health insurance coverage in the 1970s, highlights the impact of costs on the demand for medical care for children. Children eligible for free care were more likely to receive preventive services (e.g., immunizations, vision tests, and general medical examinations). They were also more likely to receive

care for illnesses such as acute bronchitis, acute upper respiratory infections, common childhood injuries, and ear infections.<sup>8</sup>

Disparities in medical care for insured and uninsured children can grow with the age of the child, a study published in 1992 found. The authors, examining data from the 1987 National Medical Expenditures Survey, found that “more than 90 percent of children 5 years of age or younger with private insurance obtained ambulatory care compared to only 75 percent of children uninsured all year. While 75 percent of children 6 years of age or older with private insurance obtained ambulatory care, a little more than half of those uninsured all year obtained such care.”<sup>9</sup> Given such trends, the study’s authors called for “bold initiatives through the private and public sectors.” To do otherwise “may cause uninsured children to continue losing ground to insured children, both in terms of their access to care and in terms of their use of essential and cost-effective health services,” they wrote.

### THE IMPACT OF HEALTH INSURANCE ON CHILDREN’S HEALTH

The studies above demonstrate that lack of insurance for children leads to lower access to medical care and lower use of health care services. What are the consequences of uninsurance for the health of these children? A study published in the journal *Pediatrics* compared the health status of uninsured children who would be eligible for the State Children’s Health Insurance Program (SCHIP) to privately insured children in families with similar incomes. The study was conducted using data from the 1993 and 1994 National Health Interview Surveys, so that comparable groups of uninsured and insured children could be studied prior to the implementation of SCHIP in 1997.<sup>10</sup> The study found that the uninsured SCHIP-eligible children were overwhelmingly in good health, and most had no chronic health conditions (76.5%) or school (94.9%) or major activity (94.0%) limitations. However, the uninsured children were almost one-and-a-half times as likely to report being in fair or poor health relative to privately insured children in families with similar incomes.

Another study published in *Pediatrics* compared the experience of children with asthma who were newly enrolled in the New York SCHIP program in

2001, versus another sample of asthmatic children in the SCHIP program 13 months later. Both samples contained approximately 2500 children.<sup>11</sup> Children were found to have far fewer asthma-related attacks (3.8) in the year after enrollment, versus the 12 months prior to enrollment in SCHIP (9.5). The percentage of children hospitalized for asthma in the previous year also declined dramatically (from 11.1% to 3.4%). In addition, the percentage of children visiting the emergency department in the previous year for asthma treatment declined after enrollment in SCHIP (from 35.2% to 15.6%). This before-versus-after comparison provides a striking picture of the beneficial effects of children’s health insurance for one particular chronic ailment.

A third study published in *Pediatrics* compared hospitalization rates for children with public insurance or no health insurance at all, to privately insured children. The study analyzed hospital data from throughout the United States in 2000, as well as data from Colorado between 1995 and 2003.<sup>12</sup> The study found that children with public insurance or no insurance had significantly higher rates of total hospital admissions, as well as admissions for chronic illness, asthma, diabetes, vaccine-preventable disease, psychiatric disease, and appendix ruptures. Publicly insured or uninsured children also had higher mortality rates and higher severity of illness. These differences remained significant after controlling for age and ethnicity differences between the two patient populations. The authors did not report separate statistics for publicly insured versus uninsured children. It is possible that most of the inferior outcomes for this group are attributable to the uninsured group, because other studies have demonstrated that children who obtain public insurance use more services and achieve better health than the uninsured.

Sadly, the absence of health insurance has even been associated with increased childhood mortality. Two prominent health economists, Janet Currie and Jonathan Gruber, have studied the impact of expansions in Medicaid eligibility that occurred in all states beginning in the 1980s. These studies were conducted using data from the National Health Interview Survey, which interviews a large, nationally representative cross section of American families each year. The researchers obtained data

from the surveys conducted from 1984 through 1992, leading to a sample of more than 225,000 children. The analyses indicated that the 15.1 percentage point rise in Medicaid eligibility that occurred between 1984 and 1992 decreased child mortality by 5.1%.<sup>13</sup> To confirm the validity of their results, the authors tested whether the expansions in Medicaid eligibility were accompanied by declines in internal causes of death (e.g., disease), versus external causes (e.g., accidents, homicides, and suicides). Access to health insurance was expected to influence internal causes of death, but not external causes. Indeed, the authors found that the Medicaid expansions reduced internal causes of death by 8%, but had no significant impact on external causes.

In addition, research indicates that enrolling children in Medicaid before they get sick reduces the need for hospitalizations, presumably due to the increased use of preventive care. Health economist Anna Aizer examined the impact of a California outreach campaign launched in 1998, which was targeted to enroll uninsured and underinsured children in the state's Medicaid or Children's Health Insurance Program. The results suggest that the outreach program increased Medicaid enrollment anywhere from 9% to 27%, depending on the ethnicity of the family.<sup>14</sup> The estimates obtained from the study indicate that a 15% increase in Medicaid enrollment could lead to a 2.7% decline in hospitalizations due to better preventive care resulting from insurance coverage. The total estimated savings amounted to \$8 million annually for California.

### **THE IMPACT OF CHILDREN'S HEALTH INSURANCE ON OUTCOMES IN ADULT LIFE**

There is increasing concern among researchers of children's issues that the absence of health insurance for children may have adverse consequences for long-term health and well-being. There are no longitudinal studies in the United States that identify children with and without health insurance and track their health or socioeconomic outcomes through adolescence and into adulthood. However, there is growing evidence from a range of studies relating child health to future educational and labor market outcomes.<sup>15</sup> Given that the studies cited above link the absence of health insurance to poor health in childhood, the literature

linking child health to adult outcomes requires careful consideration.

Low birth weight in the United States and other developed countries has been associated with lower educational attainment and other negative future outcomes.<sup>15-17</sup> Given that lack of health insurance for pregnant women leads to greater rates of low-birth-weight babies,<sup>18</sup> any move to provide universal health insurance coverage to children should include coverage for prenatal care. Many studies of the effects of birth weight on future child outcomes compare low-birth-weight babies (usually defined as <2500 grams) to siblings or twins with normal birth weight, so that one can control for the general health status of the mother and family socioeconomic status. For example, a study that compared twins born to the same mother in a large sample of Norwegian families found that a 10% increase in birth weight leads to a 1 percentage point increase in the probability of graduating from high school and a 1% increase in earnings.<sup>16</sup> A study of approximately 13,000 U.S. births during the second half of the twentieth century found that, between siblings, low birth weight is strongly related to poorer adult health and lowers adult annual earnings by 17.5%.<sup>19</sup> The researchers found that measures such as passage comprehension, reading ability, and math achievement were strongly affected by low birth weight. For example, children weighing 3.3 pounds at birth scored 12% lower than average on reading comprehension tests.

Other studies examine the effect of poor health status in childhood on future education and labor market outcomes. For example, a study in the *Journal of Health Economics* examined data from the National Child Development Study, which followed all children born in Great Britain in the week of March 3, 1958, to age 42.<sup>20</sup> Children were queried on the number of chronic conditions they had at age 7 and 16. The chronic conditions included physical impairments (e.g., general motor handicaps), mental and emotional conditions, and "systems" conditions (e.g., respiratory conditions, epilepsy). Educational attainment was measured using the number of O-level examinations passed at age 16. The mean number of exams passed in the sample was approximately two. The analysis indicated that each childhood chronic condition at age 7 was associated with a 0.3 reduction in the number of O-level exams passed, and each condition at age 16

with an extra 0.2 reduction. An additional chronic condition at age 16 was associated with a 4 percentage point reduction in the probability of employment at age 33, and a 5 percentage point reduction in the probability of employment age 42. Chronic conditions present at age 7 were associated with a lower probability of employment at age 42 only if these conditions continued to be present at age 16.

There are no peer-reviewed journal publications in the United States that examine longitudinal data as detailed as that from the British survey. However, a RAND report analyzed data from the U.S. Panel Survey of Income Dynamics. The survey queried respondents between the ages of 25 and 47 in 1999 to characterize their health status from birth to age 16: Was it excellent, very good, good, fair, or poor?<sup>21</sup> The regression analyses compared differences in childhood health status between siblings to their subsequent outcomes as adults. The analyses indicated that better health status in childhood was associated with higher incomes, higher wealth, more weeks worked, and a higher growth rate in income. A sibling who reported excellent or very good health in childhood earned 24% more than a sibling who was not in good health. Given that other studies have found that lack of insurance coverage leads to lower health care quality and subsequent worse health, the downstream consequences of failing to provide health insurance for children may have significant negative implications for economic productivity for the next generation.

### **THE VALUE OF LIFE LOST DUE TO LACK OF HEALTH INSURANCE**

Between 2001 and 2004, the Institute of Medicine Committee on the Consequences of Uninsurance issued a series of six reports to assess U.S. policies regarding health insurance and the lack of coverage for one out of every seven Americans.<sup>22</sup> As part of this analysis, the committee commissioned Elizabeth Vigdor, a health economist, to estimate the value of diminished health and longevity among the approximately 40 million persons in the United States who lack health insurance.<sup>23</sup> The study compared the length of life, the prevalence of adverse conditions among those alive, and the health-related quality of life for the insured versus the uninsured. The disparities in these factors for insured versus uninsured individuals were assigned

a dollar value defined as “health capital.” Health capital is the value to the individual of the “stock” of health that he or she can expect to experience over the remaining course of life.

Based on information drawn from two of its reports, the committee chose to assume a 25% greater mortality risk for uninsured individuals between ages 1 year and 65 years compared with the insured. Previous research by health economists has suggested that individuals value an additional year of life in perfect health at approximately \$160,000. Thus, one could obtain a rough estimate of the present value of life lost for children without insurance by multiplying the difference in life expectancy for those with, versus those without insurance throughout childhood, by the discounted value of each additional year of life lived, assuming it was spent in perfect health. Health economists agree that it is appropriate to discount the value of future life years at a rate of 3% per year to correctly account for trade-offs between resources utilized today, versus in the future.

The analysis by Vigdor aimed for a more accurate estimate of the value of life lost due to uninsurance by accounting for differences in health status while alive for the insured versus uninsured. Data from the National Health Interview Survey (NHIS) for the years 1998 to 2000 were analyzed to measure disparities in 14 common illness conditions (e.g., asthma, diabetes, and bad hearing) in the insured versus uninsured populations. The NHIS surveys a cross section of approximately 100,000 people in the United States each year regarding their health status, use of medical services, and insurance coverage. Vigdor then applied regression analysis to the NHIS data to quantify how each of these illness conditions influences health-related quality of life (HRQL). The HRQL measures were then normalized, in order to scale down the value of each year of life lived for insured and uninsured people, according to the presence of these illness conditions that arise as individuals age. These normalized values are often referred to as quality-adjusted life years (QALYs).

The results of Vigdor’s analysis appear in Table 1 on page 7. The approximate present value of future forgone health capital for an uninsured newborn male child is \$15,572. That is, a newborn male child who goes through life without health insurance coverage will experience a loss in prolonged life span and health

status that is valued at \$15,572. The present value of health capital lost for an uninsured male age 18 years old is \$19,136. The figures are slightly lower for females, reflecting differences in life expectancy and morbidity between the two genders. These figures may seem small, given that the study assumes that the study values a full year of life in perfect health at \$160,000. However, one must keep in mind that for a newborn child, much of the decreased life expectancy and health quality resulting from lack of insurance will be felt 60-plus years from birth, and this burden is discounted at a rate of 3% per annum. Economic analysis requires that large losses incurred well in the future to be down-weighted in present value calculations. However, as we will describe below, the estimated future costs of providing health insurance coverage to uninsured children will be treated similarly when converting costs to current dollars.

**TABLE 1: PRESENT VALUE OF HEALTH CAPITAL LOST DUE TO LACK OF INSURANCE COVERAGE**

Age	Males	Females
0	\$15,572	\$11,646
18	\$19,136	\$13,018

Source: Table 4.1. Hidden costs, value lost. Institute of Medicine, 2003.

Vigdor cautions that the figures in Table 1 are an upper-bound estimate of the value of life lost, because some of the measured differences in illness between insured and uninsured individuals may be due to unobserved third factors which happen to differ for these two populations that are unrelated to insurance. For example, the uninsured may be more likely to be asthmatic, because they are more likely to live in highly polluted cities. Vigdor attempted to control for this possibility by entering an extensive list of control variables in her regressions, including race, ethnicity, education, family income, and region of residence.

**THE COSTS OF EXPANDING HEALTH INSURANCE COVERAGE**

U.S. children (age 0-18 years) received an estimated \$7.2 billion in uncompensated health care in 2008.<sup>24</sup> A variety of public and private sources assumed the

cost of this care through Medicaid disproportionate share (DSH) payments, tax appropriations, public and private grant programs, and providers' profits from care to privately insured patients.<sup>2</sup> Thus, workers and employers indirectly pay for a large portion of uncompensated care through income and corporate taxes at the local, state, and federal levels.

One way to estimate the cost of providing health insurance for uninsured children is by assuming that they would consume the same amount of health care services as children with similar characteristics who are already covered with health insurance throughout the year. This approach was taken in a study by Jack Hadley et al. published in the journal *Health Affairs*.<sup>24</sup> Note that one cannot simply compare differences in average health care expenditures for uninsured and insured children to obtain an estimate of the cost of insuring children who currently lack coverage. Many of the uninsured are younger and healthier than the insured, so uninsured children would be expected to have lower medical spending independently of their lack of insurance.<sup>2</sup> Hadley et al. applied statistical models in their analysis to control for the effects of health status and other demographic and socioeconomic characteristics when predicting how much more uninsured children would spend if insured.

The authors used data from the Medical Expenditure Panel Survey for the years 2002-2004. Uninsured children were assumed to consume the same amount of services as currently insured children utilize (averaging over public and private use) if they were to receive coverage. Using this approach, uninsured children would be estimated to have used \$505 per year in additional health care services if they had been insured in 2008. On aggregate, health care expenditures for these children would have increased from \$25.9 billion to \$35.5 billion in 2008, a change of \$9.6 billion.<sup>25</sup> This amount is relatively small, compared to the estimated additional costs of \$112.9 billion that would be required to cover uninsured adults. The \$9.6 billion figure is also relatively small compared to total national health expenditures, which were estimated to reach \$2.4 trillion in 2008.

The Institute of Medicine's estimates of the value of life lost due to lack of insurance coverage for children can be weighed against these estimates of the cost of providing these children coverage. If we assume that uninsured children will consume the

same amount of medical services as insured children once they are covered, then the additional cost of coverage is \$505 per year per child. Summing this value from birth to age 18 and discounting at a rate of 3% per year for expenses incurred in future years leads to a total cost estimate of \$7,451 in current dollars. This cost figure compares favorably to the estimated value of life lost for newborns who will spend their childhood without insurance, as reported in Table 1. That is, the additional cost of providing uninsured children with health coverage is estimated to be fully offset by the additional value of quality-adjusted life years gained from having health insurance. In fact, from a societal perspective, providing universal health insurance coverage for children appears to be cost saving.

One can also examine children's health insurance coverage in terms of its cost per year of life saved. We previously discussed the study by Janet Currie and Jonathan Gruber, which found that the 15.1 percentage point rise in Medicaid eligibility that occurred between 1984 and 1992 decreased child mortality by 5.1%.<sup>13</sup> The authors used their estimates to simulate the costs of expanding Medicaid eligibility for children by an additional 10%. Their estimates indicate that this expansion would have covered an additional 1,293,194 children at a cost of \$1.17 billion. The expansion would have saved the lives of 727 children, at a cost of \$1.61 million per life saved. This figure is substantially lower than estimates of the value of a human life that have been obtained from previous academic studies, which generally range from \$4 to \$7 million.<sup>26</sup>

### **THE BENEFITS OF EXPANDING CHILDREN'S HEALTH INSURANCE COVERAGE**

The research above provides evidence that universal health insurance coverage for children in the United States will improve children's access to health care and health status. These health benefits are likely to persist through adulthood, leading to improved education outcomes and ultimately greater labor market productivity. In fact, the estimated costs of increased coverage are likely to be offset by the value of health capital gained due to lengthened life expectancy and improved quality of life.

Providing universal children's health insurance coverage may also yield timely economic stimulus in an economic recession.<sup>27</sup> A previous study examined family spending behavior when Medicaid was expanded to cover additional low-income children and pregnant women in the late 1980s and early 1990s. The study found that families that gained insurance coverage through this expansion increased spending on other consumer goods by the equivalent of approximately \$800 per family per year in 2009 dollars.<sup>28</sup> Boosting consumer expenditures for these families by such a sizable amount in the midst of the current contraction in consumer spending would contribute significantly to a broad-based economic recovery.

Some might be concerned that expanding health insurance coverage will lead to wasteful spending on unnecessary care. Lowering the costs of obtaining health care may lead patients to consume health care whose marginal benefit is lower than its marginal cost to society. This question was addressed in a study that analyzed data from the National Hospital Discharge Survey (NHDS), a continuous nationwide survey of inpatient utilization at nonfederal, short-stay hospitals. The authors analyzed data from the 1983 through 1996 versions of the NHDS to examine the impact of the Medicaid expansions on avoidable and unavoidable hospitalizations for children.<sup>29</sup>

Avoidable hospitalizations are defined as those admissions that might not have occurred had patients received effective, timely, and continuous outpatient (ambulatory) medical care for certain chronic disease conditions. The top six pediatric avoidable hospitalizations are for asthma; pneumonia; gastroenteritis; ear, nose, and throat infections; dehydration; and kidney/urinary tract infections. The analysis of the NHDS data indicates that unavoidable hospitalizations increased by 8.1% with the Medicaid expansions, but that there was no statistically significant rise in avoidable hospitalizations. These results suggest that the Medicaid expansions facilitated an increase in timely, effective primary health care for children who would otherwise have been uninsured. In turn, the improved outpatient care allowed the Medicaid program to avert an increase in avoidable hospitalizations, so that the "full" increase in hospitalization rates that one might expect with more generous insurance coverage did not arise.

These results were supported by a more recent analysis of 281,000 preventable pediatric hospital admissions in California between 2000 and 2005. During this time period, 26 of California's largest counties formed coalitions known as Children's Health Initiatives (CHIs). CHIs aimed to achieve universal children's coverage by expanding enrollment into Medi-Cal and Healthy Families (California's Medicaid and SCHIP programs), and by creating an additional insurance product called Healthy Kids, which is a locally funded insurance program for children ineligible for the state and federal programs. The analysis of California hospital discharge data revealed that avoidable hospitalizations were 19% lower for low-income families post-implementation of CHIs versus pre-implementation.<sup>30</sup> An estimated 6,324 avoidable hospitalizations may have already been prevented due to the implementation of CHIs, saving about \$6.7 million over the six years, assuming \$7000 per child hospitalization.

## CONCLUSION

The collective body of research that we have reviewed provides compelling evidence that covering all children in the United States with health insurance will yield immediate improvements in the health of children, as well as long-term returns of greater health and productivity in adulthood. The upfront incremental costs of universal health insurance coverage for children are relatively modest, and they will be offset by the value of increased health capital gained in the long term.

We did not have sufficient time to review the research on the equity and efficiency of various approaches to providing universal health insurance coverage for children. It is likely that a move toward universal health insurance coverage would be accompanied by a change in the patchwork quilt of taxation at the local, state, and federal levels which is currently used to finance health care for the uninsured. It is possible that one can structure the financing of health care for uninsured children in a manner that lowers the deadweight loss to the economy of the current uncoordinated mixture of tax revenues that pays for uncompensated children's health care.

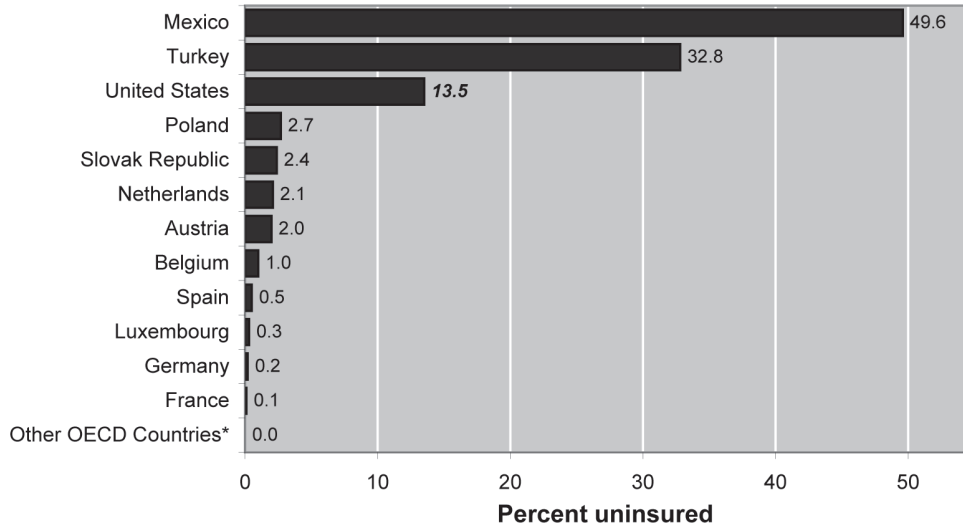
Many policymakers are concerned that a move to universal coverage that is accomplished through increased government-provided insurance will lead to greater crowd-out of private health insurance. That is, some families may drop private insurance and elect government-provided coverage if public insurance becomes more generous. For example, recent research by Jonathan Gruber and Kosali Simon suggests that expansions in Medicaid and SCHIP between 1996 and 2002 led to significant crowd-out of private insurance. For each 100 additional children who became eligible for Medicaid or SCHIP during this period due to expansion of these programs, 10.9 took up public coverage. But at the same time, 6.6 children dropped private coverage.<sup>31</sup> Further analysis indicated that families dropping private coverage and shifting to public coverage tended to be those who were covering their children through their employer's health policy.

There are many other studies that have examined the issue of public crowd-out of private health insurance.<sup>32-34</sup> While the conclusions on the magnitude of crowd-out vary from almost none to 100%, we must keep in mind that these estimates may not be relevant to the policy question of providing universal health insurance coverage for children. The existing studies examine families' decisions in an environment where there is an option to choose public or private coverage, or no coverage at all. Universal coverage would involve a mandate of some type for all children to have health insurance. An example of an existing compulsory system is Medicare hospital insurance, or Medicare Part A. All U.S. workers pay Medicare payroll taxes and, in turn, all residents are offered Medicare Part A insurance upon retirement.

Thus, the issue of crowd-out of private insurance will more likely depend on how universal insurance coverage is implemented. Policymakers will need to think carefully about how to structure a program that extends coverage to all children without substantial crowd-out. Yet policymakers have an advantage in that the current public sentiment in favor of health care reform will allow greater flexibility in choices regarding health care finance. For example, tax incentives could be introduced to encourage families to maintain private versus public insurance coverage for their children. Regardless of the form that universal health insurance coverage for children takes, the economic benefits far outweigh the costs for this country.

**Figure 1**

**Percent Uninsured in the Organisation for Economic Co-operation and Development (OECD) Countries, 2005**



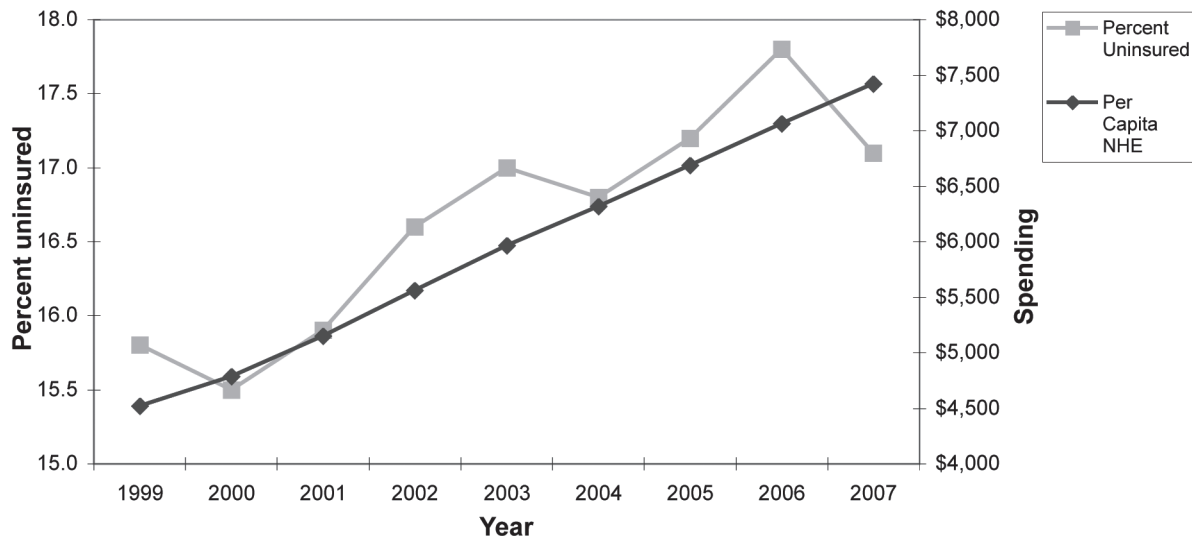
Source: OECD Health Data 2007, Health at a Glance 2007: Focus on Quality of Care (<http://puck.sourceoecd.org/vl=824245/cl=11/nw=1/rpsv/health2007/index.htm>)

Note: Uninsured is defined as not covered at the time questioned.

\*The United Kingdom, Switzerland, Sweden, Portugal, Norway, New Zealand, Korea, Japan, Italy, Ireland, Iceland, Hungary, Greece, Finland, Denmark, Czech Republic, Canada, and Australia all have 0% uninsured.

**Figure 2**

**Percentage Uninsured Under Age 65 & Per Capita National Health Expenditures, 1999-2007**

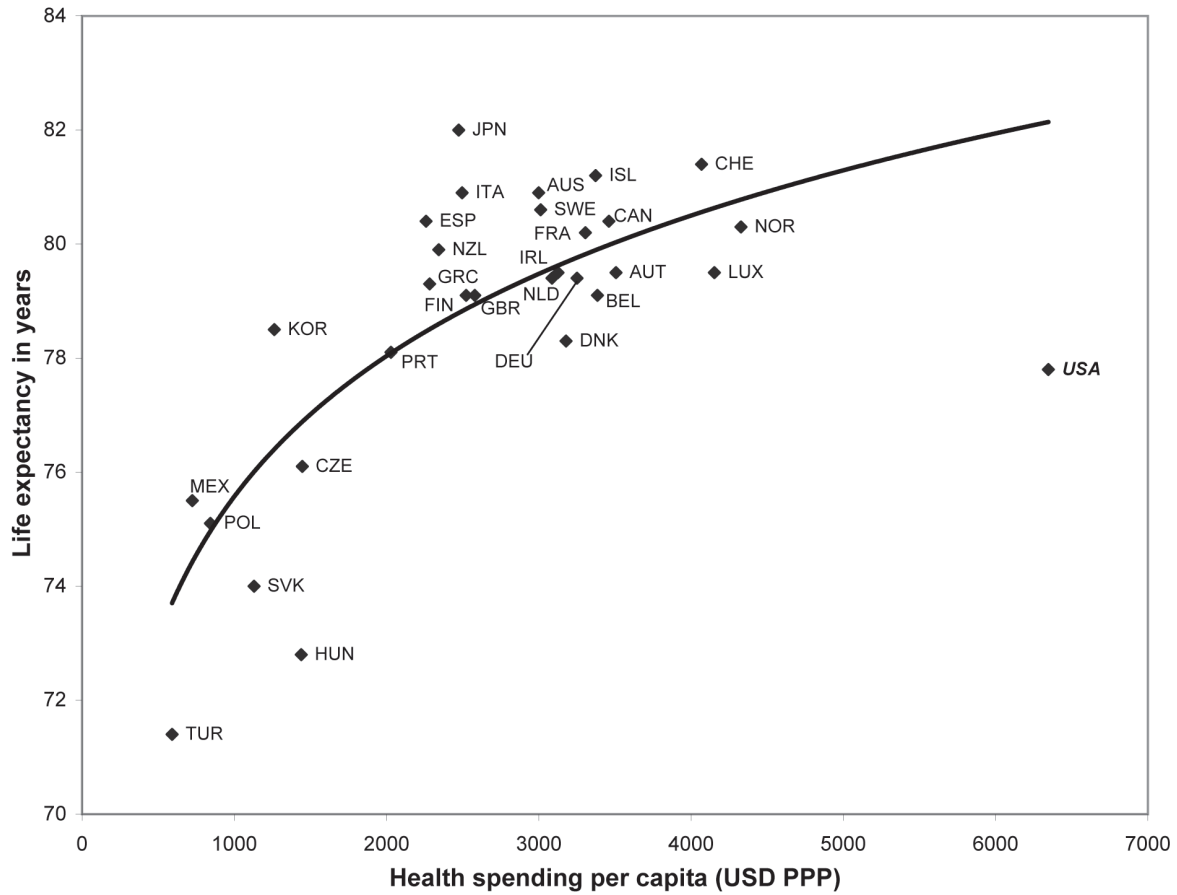


Source: U.S. Census Current Population Survey, Annual Social and Economics Supplement (<http://www.census.gov/hhes/www/hlthins/historic/index.html>); Centers for Medicare & Medicaid Services, Office of the Actuary: Data from the National Health Statistics Group ([http://www.cms.hhs.gov/NationalHealthExpendData/01\\_Overview.asp#TopOfPage](http://www.cms.hhs.gov/NationalHealthExpendData/01_Overview.asp#TopOfPage))

Note: Uninsured is defined as not covered at any time during the year.

**Figure 3**

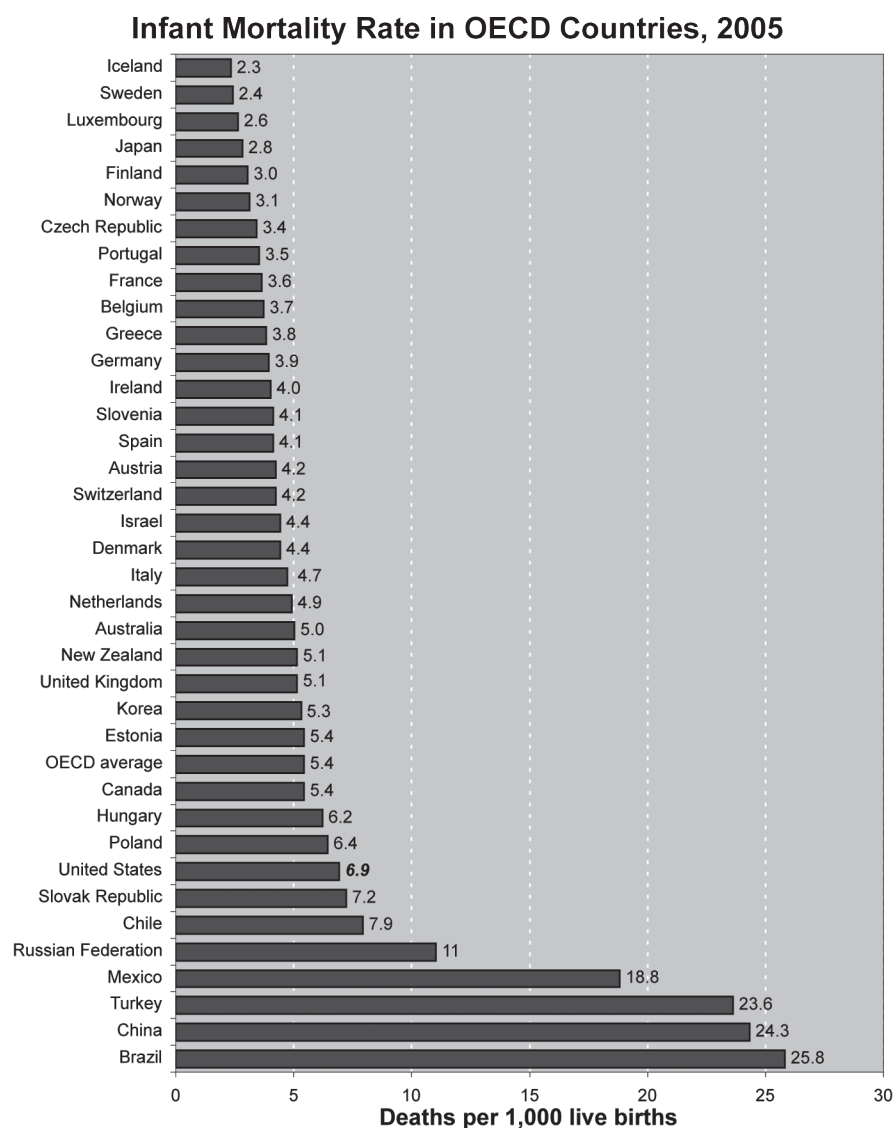
**Life Expectancy at Birth and Health Spending Per Capita, 2005**



Source: OECD Health Data 2007, Health at a Glance 2007: Focus on Quality of Care (<http://puck.sourceoecd.org/vl=824245/cl=11/nw=1/rpsv/health2007/index.htm>); OECD Factbook 2009: Economic, Environmental and Social Statistics (<http://masetto.sourceoecd.org/vl=888006/cl=39/nw=1/rpsv/factbook2009/index.htm>); OECD, Stat Extracts, OECD Health Data 2008 - Selected Data (<http://stats.oecd.org/WBOS/index.aspx>)



**Figure 6**



Source: OECD Health Data 2007, Health at a Glance 2007: Focus on Quality of Care (<http://puck.sourceoecd.org/vl=824245/cl=11/nw=1/rpsv/health2007/index.htm>); OECD Factbook 2009: Economic, Environmental and Social Statistics (<http://masetto.sourceoecd.org/vl=888006/cl=39/nw=1/rpsv/factbook2009/index.htm>)

Note: In Canada, Japan, the United States and some of the Nordic countries, very premature babies with a low chance of survival are registered as live births, resulting in higher reported rates compared to countries that do not do so.

## ACKNOWLEDGMENTS

The Baker Institute acknowledges the M.D. Matthews Foundation, The Sid W. Richardson Foundation, and the Baker Institute Health Policy Forum for their financial support in preparing this report.

## ENDNOTES

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