

Does the Effect of Income on Health Still Increase with Child Age?

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Children of wealthier parents are healthier than other children. This relationship is apparent in key indicators of child health such as activity limitations, asthma, and mental health problems. Poor health in childhood is likely to affect adult well-being both directly, through its effects on health, and indirectly, through inhibiting the child's accumulation of human capital. Since 17 percent of all U.S. children under age 18 live in poor families, it is essential to have a better understanding of the link between poverty and ill health.

Using data from the 1987 to 1995 National Health Interview Survey's as well as supplementary data from the NHANES III collected in the early 1990s and PSID data from 1997, Case, Lubotsky, and Paxson (2002) document the well-known cross-sectional relationship between SES and health during childhood in the U.S. and show that this relationship becomes more pronounced as children age. The latter finding is of particular interest as it may provide insights into the causes of SES-related gradients in health. It suggests, for example, that the health of the poor may deteriorate relative to that of the rich because of accumulating numbers of health insults, because poor children receive inferior medical attention for a given condition, or because low SES poses greater hazards for older than for younger children.

This paper investigates the evolution of the relationship between income, health, and child age over time. One reason that this relationship may have changed in the past 20 years is that federally-mandated expansions of the Medicaid program to additional groups of children phased in gradually over this period. In April 1990, for example, states were required to cover poor children up to age six, while older children were not covered. Thus, in 1990 poor young children had access to public

health insurance, while older poor children did not. By Sept. 2001, all poor children were required to be covered. The State Child Health Insurance Program begun in 1996 provided an additional source of public health insurance coverage for low income children.

If access to health insurance mitigates the effect of low income, then one might expect to find that the relationship between income and health has weakened among older children, and that it has become more similar to the relationship between income and health among younger children over time. Using the 1980 to 2005 NHIS, we show that in 2001 to 2005, income still affects child health but that the size of the effect is much less than in earlier years, and that the coefficient on income does not increase with child age.

However, this finding does not tell us the extent to which adequate insurance coverage mitigates the income-health relationship among children. Fortunately, there was a great deal of state-to-state variation in the timing of the Medicaid/SCHIP expansions for older children that can be exploited to more formally measure the extent to which expansions of public health insurance led to reductions in the effect of income on child health.

These broad increases in health insurance coverage could have affected poor children directly by improving their individual access to care. But they could also have had indirect effects: By making such a large group of children into paying customers, the expansions may have altered the market for health care in a way that improved the treatment of poor children. Hence, the independent variable of interest will not be whether an individual child was eligible for Medicaid/SCHIP, but an estimate of the fraction of children in the index child's state-age-year cell who were eligible.

As in previous research, we will focus on the whether the child's health is

excellent, very good, good, fair, or poor (according to maternal reports) as the dependent variable of interest. We will control for known determinants of these reports such as maternal depression, race, and ethnicity. However, we will also examine the relationship between income and other measures of health including the presence of chronic conditions, activity limitations, and acute illnesses, and how this relationship has changed over time.

Finally, our estimates will provide updated estimates of the effects of the expansions of public health insurance eligibility on the health of poor children relative to Currie and Gruber (1996), who focus only on the effects of the initial expansion of coverage to younger children.

References:

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Currie, Janet and Jonathan Gruber. "Health Insurance Eligibility, Utilization of Medical Care, and Child Health," *The Quarterly Journal of Economics*, May 1996, 111 #2, 431-466.