

Invest in Kids/PAES Working Group Meeting, Tuesday, October 16, 2007

Drs. Bernard Guyer, Sai Ma, Johns Hopkins University, Investing in Children's Health

Dr. Angela Fertig, The University of Georgia, The Lasting Impact of Child Health and Circumstance

We have increasingly solid evidence that investing in children's early education results in both short- and long-term economic benefits not just for the children and their families, but for society as a whole. Is the same true of investments in children's health in their early years? The answer seems to be "yes." The two papers presented today both address critical and timely issues related to the impact of early childhood health on adult well-being, and thus economic consequences. This research thus fits into the overall agenda of the Partnership to commission, and assemble, solid research-based evidence on the economic benefits of a range of investments in early childhood policy.

Dr. Bernard Guyer of Johns Hopkins University put his research, and the issue, into context with his introductory remarks on the double standard practiced by U.S. policy-makers: we say "our children are our future," but we act as if they are anything but. Indeed, given what we know about the link between investing in them now – including in their early health – and their future, and ours, our level of investment is shockingly small and economically inefficient. Based on both his current work for the Partnership on health interventions in four specific areas, and on his career in the field of children's health, Dr. Guyer says that, while the specific numbers on costs and benefits are not as clear as we might like, we can definitely say that investing early in children's health is important, that earlier is much better, and that not doing so is costly.

In particular, he and his colleagues conducted a comprehensive literature review of studies of early childhood health interventions in four areas – exposure to tobacco use in utero and in early childhood, unintentional injury, obesity, and mental health issues. For obvious reasons, there are sharply different amounts, and levels of significance, of evidence in each of these categories; while the impact of maternal tobacco use on children, and the consequences of injuries, have long been studied, obesity in general, and especially among the youngest children, is a relatively new problem. Mental health, perhaps the most complex, and eventually the most costly, is also the least widely understood, so few interventions have been attempted and assessed.

Notwithstanding the relatively scarcity of economic measurements in some areas, Drs. Guyer and Sa presented evidence in each category of childhood health problem that failing to treating it early has long-lasting and costly repercussions. Tobacco use in utero is linked to low birth weight and respiratory problems in infancy, as well as to childhood and adolescent learning disabilities, asthma, chronic otitis media, and others. And evidence exists that smoking cessation programs, whether aimed at the mother, her partner, or more broadly at society, can be effective in reducing the number of children who develop such problems as a result. In the case of injuries – only unintentional, not abuse – the good news is that the rate has dropped dramatically in the past few decades, with increased public and medical awareness of the need for safety campaigns and better regulations. There is evidence that additional such campaigns might do more, but numbers are unclear. Mental health and obesity, Dr. Guyer said, are likely by far the most expensive not to treat in a child's earliest years, as they have very long-lasting and extensive impacts on physical and emotional well-being. Unfortunately, they are also the least understood and researched, and thus interventions to deal with them are not as clear-cut as in other cases.

Dr. Fertig presented complimentary research based on a British database that has tracked a cohort of people born in the same week in 1958 through their middle adulthood. This allows for the sort of longitudinal study that is rarely available, allowing researchers to assess the very long-term impact of infant and early childhood factors on adult outcomes. In this case, Dr. Fertig, working with Drs. Anne Case and Christina Paxson of Princeton University, used control variables to tease out the impact of early childhood health on adult well-being in terms of health, employment, and socioeconomic status. Like Dr. Guyer, she concludes that early childhood health conditions do have an impact on adult well-being, and thus on economic productivity.

Her study finds that intervening factors – adolescent and early adult health – also impact adult well-being, which is not a surprise but must be taken into account. Also like Dr. Guyer, she finds that the impacts of the earliest influences on children’s health – maternal smoking and low birthweight – persist well beyond a child’s early years into adulthood. Perhaps most important, she finds that causality is circular; health affects employment and economic well-being, which in turn affects health, a fact more likely to be true in the U.S. than in Britain, given our less comprehensive system of health coverage.

The audience then had a chance to ask questions and discuss with the presenters.

*Mental health and disorders:* Dr. Guyer agreed with one suggestion that our assessment of the cost of treating these types of ailments is probably limited by the lack of access to such care, meaning that proper care, if and when available, will be much more costly than what we now estimate. The researchers explained that their data – whether longitudinal tracking of a cohort or existing studies – prevents them from examining such issues as the “source” of a disorder. Along the same lines, intentional abuse was excluded from consideration by Dr. Guyer and his colleagues because the underlying causes, and thus the treatments, are so different. A separate body of literature exists on this topic. This also raised the issue that both researchers here, as well as others looking into investments in children, have noted: the lack of good data, and, as a result, of solid, longitudinal studies to give us economic evidence of costs and benefits in this area.

*Data:* Dr. Fertig notes that the lack of such longitudinal U.S. data that led her and her colleagues to use the British database. One audience member noted that the NCS database is being constructed and asked if either researcher had suggestions as to important inclusions, with the goal being keeping costs under control while ensuring that critical information is collected. This database will follow 100,000 pregnancies, but the timeline is only through age 12, so it will not enable the sort of long term evaluation that Drs. Fertig, Case, and Paxson conducted. Another data problem is attrition: the longer a cohort is followed, the more people drop out, and, if they are systematically different from those who remain in, data problems result. Sara Watson notes that we hope to alleviate this problem with a study that “matches” short-term results to others to create a timeline. Finally, there is no accounting for the infant mortality, and the deaths between birth and seven, in the database used by Fertig and colleagues.

*Time and adjustments in data:* The data discussions also raised the issue of when and how to adjust for changes in medical treatments and realities when looking at cohorts from different decades. For example, low birth weight at 2500 grams had different implications in 1958, when babies were, on average, much smaller, but survival rates for smaller babies were also much lower.

*Synergies/connections between different areas of childhood investment:* Dr. Guyer notes that health and early education are inextricably linked, school and family and nutrition and neighborhood all are part of one. He sees a need to build that common argument and says that we can make it, it's just much harder to measure the magnitude. One challenge is that people see this as a turf war, with public schools and private health providers protecting their space, making it more difficult to get these systems "talking" to each other. Our job, then, is to build this bridge, since we know that, logically, you can't really disconnect them.