

# Parental Chronic Illness and Child Welfare

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## ABSTRACT

Many developing countries are undergoing the epidemiologic transition,<sup>1</sup> but with polarization – they are experiencing an increase in the incidence of the degenerative and chronic diseases associated with longevity, without the commensurate decrease in parasitic and infectious disease. This situation presents the country with a double disease burden (Shrestha, 2000). This is particularly true in Latin America and Asia, but even in Sub-Saharan Africa the probability of death from non-communicable diseases is now higher than in many established market economies (Unwin *et al.*, 2001).

Chronic illnesses are often characterized by high costs of care, which can be catastrophic to households in developing countries. Few households have sufficient current income or savings to cover the costs of care, and formal health and disability insurance is rare (Russell, 2004; World Bank, 1993). Given these costs, there is concern about the effects on more vulnerable members of the household, particularly children, whose care often already stretches household budgets. More specifically, if parental chronic illness reduces investments in children's human capital, it can have long-term effects on that child's quality of life and productivity. In this paper, we estimate the effects of parental chronic illness on human capital investments in children in a developing country, Indonesia.

The effect of chronic disease on households in developing countries has largely been overlooked in the literature. The majority of studies on chronic illness focus on its effect on the labor supply of older white males in industrialized country settings (Wilson, 2001; Currie and Madrian, 1999; Chirikos, 1993). The concern over the effects of HIV/AIDS has spawned a sizable related literature devoted to determining the effect of

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<sup>1</sup> The "epidemiologic transition" refers to relatively constant patterns of changes in patterns of disease as societies develop. In developing countries, although infectious diseases still predominate, non-communicable diseases (such as cardiovascular problems) are increasingly competing for the allocation of scarce health resources.

adult mortality on children, and on children's human capital, most of which find the effect to be non-negligible (Copson, 2002; World Bank, 1999; Lloyd and Blanc, 1996; Ainsworth *et al*, 2000; Gertler *et al*, 2004). In a developing country setting, Gertler and Gruber (2002) analyze the effect of a major illness on household consumption in Indonesia, and find that there is very imperfect insurance of consumption over episodes of illness. They report that families are able to insure less than 40 percent of the income loss from illnesses that severely limit physical functioning. Kabir *et al* (2000) explores the relationship between illness and household food and job security in Bangladesh, and concludes that illness reduced the human capital of households. These findings from studies suggest that chronic illness is likely to have significant effects on households and thus on child welfare.

The theoretical literature suggests several mechanisms by which parental chronic illness affects investments in children's human capital. For example, illness reduces financial resources via reduced labor income and costs of illness, and it reduces parental involvement in children. These are two key inputs into children's human capital. Illness may also cause household preferences for the quality of children to change, and the value of a child's time at home may change, due to reduced household resources. (Gertler *et al*, 2004). Each of these pathways may also have gender and age-order implications.

In this paper, we seek to estimate the cumulative effect of all these mechanisms. We use a unique panel dataset from Indonesia that combines excellent measures of health status and child human capital to investigate the effect of chronic parental illness on two measures of child human capital investments, school enrollment and medical care use. This data is exceptional for two primary reasons. First, it allows us to combine the use of self-reported measures of illness with measures of individuals' physical abilities to perform activities of daily living (ADLs). ADLs have proven to be both reliable and valid measures of an individual's ability to physically function, and more importantly, distinguishes the type of serious exogenous health problems that are likely to be correlated with labor market and care-giving functioning (Gertler & Gruber, 2002; Stewart, 1991; Strauss, 1993). The majority of studies of chronic illness use self-reported measures, which studies have suggested overstate the effect of illness on the outcome of

interest, such as time in the labor market (Chirikos, 1993). However, self assessments about disease remain important since they contain important information about how an individual perceives the severity of their health condition, and ultimately it is this perception that determines behavior (Wilson, 2001).

The second unique aspect of this data is that it is a panel dataset following more than 7,000 households over 7 years, with three repeat surveys. The panel structure allows us to circumvent some problems of the potential endogeneity of health in the determination of investments in human capital that cross-sectional data is unable to address.

The policy implications of the epidemiologic polarization are clear. If chronic illness reduces investments in children's human capital, this can have long-lasting implications for welfare and productivity. Chronic conditions tend to be expensive and difficult to cure, so it is appropriate to focus on their prevention. Health service weaknesses in many countries, such as sporadic coverage, user fees, and poor quality of care, contribute to high costs. Poor households in developing countries with an ill household member struggle to cope, suggesting the urgent need for a substantial increase in health sector investment to expand access to preventive and curative health services.

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