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Incidence of Antenatal Healthcare on Children's Birth Weight in Côte D'ivoire

Abstract

The objective of this paper was to analyze the incidence of access to reproductive healthcare on children's birth weight. The choice of birth weight as a health indicator is justified by the fact that this variable is highly correlated with the newborns' probability of survival and of their later physical development.

We first tried out several estimation techniques that enabled us to identify the determining factors of the demand for reproductive health services in general and the demand for antitetanus vaccination during pregnancy in particular.

The results indicate that the mother's vaccination against tetanus during pregnancy has a positive and significant effect on the child's birth weight. In addition, it appears that this effect is greater among poor households than among non-poor households. For this reason, the widening of vaccination coverage and access to antenatal healthcare can be an important instrument of poverty reduction.

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Country where the research takes place

Côte d'Ivoire

How does the research describe the impact of population/reproductive health on poverty reduction and/or economic growth?

With the economic crisis and the aggravation of poverty, Côte d'Ivoire has initiated a national reproductive health policy that is an integral part of the Primary Healthcare Strategy (PHS). It aims at the search for greater equity in access to services by being based on the analysis of the past

and current status of the reproductive health of the target groups, who are women and mothers, children, adolescents, youth, groups and communities. The general objective of this study is to analyze the incidence of the reproductive health policy on the health status and birth weight of the child. More specifically it will be a matter of:

- Identifying the socio-economic determinants of the demand for anti-tetanus vaccination during the period of pregnancy of women of child-bearing age;
- Analyzing the effect of anti-tetanus vaccination on the child's birth weight.
- We start by assumption that birth weight is an adequate indicator to measure the health of the newborn. This is all the more important as it has been proved that birth weight is an important determinant of the child's probability of survival and of its later development. In addition, taking into account the high correlation between infant mortality and the incidence of neonatal tetanus, we consider that anti-tetanus vaccination during pregnancy is a proxy of use of reproductive health services.

How will the research address a policy need, and what kind of policy lesson is expected?

The amount that Côte d'Ivoire needed for eradicating neonatal and maternal tetanus was US\$1.7 million for three years according to WHO estimates in 2003. In 1991, the prevalence of deaths due to neonatal tetanus was alarming: out of the 1,513 cases of deaths of newborns recorded in health centres that year, 1,135 were due to tetanus. More recently, it has been observed that tetanus continues to be one of the major causes of infant mortality. In 2002, it was noted that 38.3% of neonatal deaths were due to weight insufficiency, 38.4% were attributed to asphyxiation at birth and 9.3% to neonatal tetanus. All these factors are directly related to reproductive health, which indicates the major role that this component of the health system should play in the improvement of the demographic and welfare indicators of the populations. The reduction of deaths caused by the fall in neonatal tetanus is one of the simplest and most effective ways of reducing the neonatal death rate. However, as most of these deaths occur at

home, before the baby reaches the age of two weeks, which means that neither births nor deaths are declared, the number of cases notified by Côte d'Ivoire certainly remains underestimated.

The elimination of neonatal tetanus is a constant priority for the government. Thus, over the period 2001-2006 concrete actions and eradication plans were implemented. The results were not always followed inasmuch as the rate of women benefiting from protection against neonatal tetanus moved from 48 % in 2001 to 28% in 2006 in spite of the fact that the fight against neonatal and maternal tetanus was a priority.

Methods used

The functional form of the model is based on a utility approach to analysing the demand for reproductive health-care through a proxy: immunisation of the pregnant women using antitetanus vaccination for the period of pregnancy.

Data used

The data of this study come from the database of the 1998-1999 Demographic and Health Survey (DHS). Although

there is a more recent database (2005-2006), the choice of that of 1998 was dictated by the fact that the 2006 database does not have information on children's birth weight.

Demographic and Health Surveys are household surveys that revolve around maternal and child health. The 1998-1999 DHS revolves around a national sample of 3,000 women aged between 15 and 49 years and about 1,000 men aged between 15 and 59 years. The survey base is made up of the list of the clusters surveyed during the DHSCI-I of 1994. The survey base of DHSCI-I itself was made up of the Census Districts as they had been identified in 1988 during the General Population and Housing Census.

The principal strata of the survey are Abidjan, the other cities and rural areas. The city of Abidjan and the other cities were then stratified according to participating zones of the Family Health and Prevention of Aids project (SFPS), which gave five strata. Taking into account the variable size of each stratum, various survey rates were applied to each of them and the results were weighted at the national level. However, the sample is self-weighted inside each stratum.