

## **Deworming during Pregnancy and Birth Outcomes**

Nisha Malhotra & Devesh Roy

### **Abstract**

One third of infants born in India are of low birth weight (<2.5 kilograms), leading to a higher prevalence of child malnutrition. These infants are at risk of not only short term but also long term adverse health outcomes. In India, maternal anemia is one of the major concerns in low birth weight status and perinatal mortality. Intestinal parasitic infections like hookworm can cause and increase iron deficient anemia among mothers. These infections can reduce the effect of iron supplementation during pregnancy. This, in turn, can lead to low birth weight. The current study examines the role of deworming during pregnancy for birth outcomes, in particular, determining low birth weight.

Data from the latest National Family Health Survey (conducted 2005–06 and released in 2008) is used for this analysis; NFHS is the Indian component of the Measure Demographic Health survey project. Using a nationwide sample of mothers and infants (n = 17,117), a matching estimation was done to assess the effect of intake of deworming drugs during pregnancy on infant's birth weight, after controlling for various socio-demographic characteristics and the quality of available water sources and water treatment by the households. The study found that deworming during pregnancy both increased the birth weight of the infant as well as decreased the probability of low birth weight. The average increase in birth weight was estimated to be around 66 grams and the probability of low birth weight, was on average, reduced by 2.2 percentage points if deworming drugs were administered during pregnancy. This leads to the conclusion that a low cost intervention such as deworming should be considered in antenatal care packages, particularly in regions of India where helminthic infection is endemic. Apart from birth weight, several other benefits could occur from deworming during pregnancy given the pathway through Iron Deficiency Anemia (IDA).

**Keywords:** *India, pregnancy, deworming, low birth weight, quality of water*