

# Perils of low birth weight

*Karen F Alphonso, AUG 14 2020, 02:00 IST*

In India, low birth weight (LBW) is still a largely unmapped territory. This was one of the concerns raised by the United Nations International Children's Emergency Fund (UNICEF) in a report recently. While the World Health Organization (WHO) has set a target of reducing LBW globally by 30% by 2025, the absence of data at a granular level threatens to derail India's efforts at salvaging the situation. According to the latest National Family Health Survey (NFHS), 22.1% of live births in India (43% of which belong to low-income households) do not have weight recorded at birth, leading to a potential underestimation of its prevalence in the country.

The WHO considers infants born with a weight lower than 2.5 kg as suffering from LBW. It is a major predictor of prenatal mortality and morbidity. Recent studies indicate that this condition also increases the risk of non-communicable diseases such as diabetes and cardiovascular complications later in life.

The WHO pegs 15.5% of children born globally as suffering from LBW, out of which, over 96% are from developing countries. Insufficient antenatal care (ANC), low nutritional status of the mother before conception, low nutritional intake and anaemia during pregnancy, early pregnancy, pre-eclampsia, small birth spacing, and exposure to tobacco are major contributors to this condition. These conditions are rampant in developing countries.

Most children from low-income households are not weighed at birth. Of those weighed, 18.2% suffer from LBW, even after a full gestational period. This is despite government interventions such as cash-transfer programmes for improving healthcare visits, nutritional food in the form of 'Take-Home-Ration' for pregnant and lactating women in anganwadis, pre-conception folic acid supplement for reduction of congenital anomalies, and antenatal care.

The government also runs prophylactic schemes such as the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA) to improve the nutrition and health of young girls. Moreover, it doles out monetary incentives under the Janani Suraksha Yojana (JSY), for completing four compulsory ANCs on time. Large-scale distribution of iron and folic acid supplements to women in the 15 to 49 age group is also carried out under the mentioned schemes.

There is a high prevalence of malnutrition among children below 5 years in India. As per the latest NFH survey, 38.4% of them are stunted, 21% are wasted (low weight-for-height), and 35.8% are underweight. There is a positive correlation between the incidences of LBW and the prevalence of malnutrition. According to a study in the International Journal of Current Research, LBW children have greater chances of showing delayed development.

Low birth weight has both short-and-long-term effects, which are detrimental to the growth and development of children. Kids with these conditions exhibit a low growth trajectory, including cognitive development. Infants born with LBW are associated with poorer school performance between 12 to 18 years, compared to other children. A study in the journal of

Indian Paediatrics shows that the mean IQ of individuals with LBW is 20% lower than that of a normal-birth-weight individual.

Unfortunately, despite its criticality, LBW is not effectively tracked in India. Data on birth weight—from birth certificates or medical records—is unavailable for most rural children. The NFHS includes data on birth weight obtained from health cards issued by government hospitals, and surprisingly, maternal recall under the categories “very small”, “smaller than average”, “average or larger” and “don’t know”. The survey points out that in most cases, “the mother’s estimate of the infant’s size at birth was obtained because the birth weight was unknown for many infants”.

### The way forward

The detrimental effects of LBW, such as low physical and mental development, are generally irreversible. Thus, preventing its occurrence is the only effective way of dealing with it. Low birth weight can be effectively tackled using the following interventions:

**Technology:** Extensive surveys and audits of accurate birth weight records need to be institutionalised. Birth weight data for every child needs to be recorded and stored in the national health data system or on a platform/system that will make tracking easy and effective. The use of technology such as digital weighing machines, linked to a computer or mobile, can be used to make the data more reliable. Technology will also ensure that birth weight is regularly monitored, aiding the development of preventive measures.

**Exhaustive research:** Not enough studies have been undertaken to gauge the socio-economic causes for LBW. According to a study in the district of Shivamogga, Karnataka, 31.3% mothers delivered low birth weight babies, of which most had negligible weight gain during pregnancy. Another such study reveals that mothers who consume alcohol and do not have proper antenatal check-up are more likely to give birth to low birth weight babies. Specific regions have specific causes—consumption of alcohol by expectant mothers in Tripura; socioeconomic status and educational status of mothers in Haryana; birth weight not being considered a determinant of newborn’s health in Uttar Pradesh—for low birth weight prevalence. Therefore, more widespread research is the need of the hour.

**Calcium supplement:** Based on widespread trials, WHO recommends large-scale implementation of calcium supplements during pregnancy in populations with low-calcium intake. Consumption of calcium supplements during pregnancy have shown to reduce cases of gestational hypertension by 35%, preeclampsia by 55%, and preterm births by 24% -- major causes for LBW. Unlike iron, large-scale distribution of calcium supplements is not well institutionalised in India. This is a huge gap, as the most vulnerable and marginalised sections of the society have low calcium intake.

India should put its weight behind evidence-based interventions, collection of accurate data at the granular level, and effective execution of existing policies, to bring down the occurrence of low birth weight.

(The writer is a Research Associate at CSTEP, a non-profit, research-based think tank)