

WHA Global Nutrition Targets 2025: Low Birth Weight Policy Brief



**TARGET: 30% reduction of
low birth weight**



WHO/Pallava Bagla

What's at stake

In 2012, the World Health Assembly Resolution 65.6 endorsed a *Comprehensive implementation plan on maternal, infant and young child nutrition*¹, which specified six global nutrition targets for 2025². This policy brief covers the third target: **a 30% reduction of low birth weight**. The purpose of this policy brief is to increase attention to, investment in, and action for a set of cost-effective interventions and policies that can help Member States and their partners in reducing rates of low birth weight.

Low birth weight (LBW) is defined by the World Health Organization (WHO) as weight at birth less than 2500 g (5.5 lb). Low birth weight continues to be a significant public health problem globally and is associated with a range of both short- and long-term consequences. Overall, it is estimated that 15% to 20% of all births worldwide are LBW, representing more than 20 million births a year. The goal is to achieve a 30% reduction of the number of infants born with a weight lower than 2500 g by the year 2025¹. This would translate into a 3.9% relative reduction per year between 2012 and 2025 and a reduction from approximately 20 million to about 14 million infants with low weight at birth.

Preterm birth is the most common direct cause of neonatal mortality³. Every year, 1.1 million babies die from complications of preterm birth. Low birth weight is not only a major predictor of prenatal

mortality and morbidity, but recent studies have found that low birth weight also increases the risk for noncommunicable diseases such as diabetes and cardiovascular disease later in life^{4,5}.

There is considerable variation in the prevalence of low birth weight across regions and within countries; however, the great majority of low birth weight births occur in low- and middle-income countries and especially in the most vulnerable populations^{6,7}. Regional estimates of LBW include 28% in south Asia, 13% in sub-Saharan Africa and 9% in Latin America (see Table 1). It is worth noting that these rates are high, in spite of the fact that the data on LBW remain limited or unreliable, as many deliveries occur in homes or small health clinics and are not reported in official figures, which may result in an underestimation of the prevalence of LBW.

Nevertheless, low birth weight is a global concern, as some high-income countries are also faced with high rates for their contexts (e.g. Spain, the United Kingdom of Great Britain and Northern Ireland [UK] and the United States of America [USA])³. Currently, a high percentage of infants are not weighed at birth, especially in low-income countries, presenting a significant policy challenge (see Table 1). There is also substantial intra-country variation. Population groups

in the highest socioeconomic positions are more likely to receive adequate health care with care standards similar to those in high-income countries. Therefore, identifying populations at greatest risk of low birth weight, as well as those that are most likely to face barriers in access to health and nutrition interventions, is a global priority and fundamental for the success of large-scale programmes.

Table 1. Data for low birth weight^{a,b}

Region ^a	% of infants with low birth weight ^b	% of infants not weighed at birth ^b
Sub-Saharan Africa	13	54
Eastern and southern Africa	11	46
West and central Africa	14	60
Middle East and north Africa	—	—
South Asia	28	66
East Asia and Pacific	6	22
Latin America and Caribbean	9	10
Least developed countries	13	46
World	15	48^c

There are multiple causes of low birth weight, including early induction of labour or caesarean birth (for medical or non-medical reasons), multiple pregnancies, infections and chronic conditions such as diabetes and high blood pressure⁵. The consequences of low birth weight include fetal and neonatal mortality and morbidity, poor cognitive development and an increased risk of chronic diseases later in life⁴. This policy brief aims to highlight effective actions to reduce the incidence of low birth weight.

The multifactorial nature of low birth weight and its implications

Low birth weight is a complex syndrome that includes preterm neonates (born before 37 weeks of gestation), small for gestational age neonates at term and the overlap between these two situations – preterm, small for gestational age neonates, who typically have the worst outcomes. These three groups have their own subgroups, with individual components linked to different causative factors and long-term effects, and distributions across populations that depend on the prevalence of the underlying causal factors^{4,10,11}. Understanding and differentiating the various categories and their subgroups is an essential first step in preventing these conditions¹²⁻¹⁴.

^a Classification of countries according to the United Nations Statistical Division⁸.

^b Regional aggregates are presented where adequate population coverage is present, based on available data 2008–2012.

^c Excludes China (United Nations Children’s Fund [UNICEF] estimate, as of February 2014)⁹.

Source: UNICEF data (2014). Nutrition: low birth weight⁹.

It has been reported that preterm small for gestational age birth is associated with medical conditions related to chronic hypertension and pre-eclampsia/eclampsia¹⁵. The presentation of pre-eclampsia highlights the complex interactions that exist between nutrition, preterm birth and small for gestational age. Pre-eclampsia, which only occurs in pregnancy, is associated with both preterm birth (spontaneous or induced due to severe disease) and small for gestational age, owing to reduced placental function, which includes poorer transfer of nutrients to the fetus. The mother's nutritional status also alters her risk of pre-eclampsia. Based on the results of a large trial conducted by the WHO, which has been confirmed by several systematic reviews, calcium supplementation during pregnancy for women with low calcium intake has been identified as one of the effective nutritional interventions because it reduces the incidence of pre-eclampsia and may also reduce the rate of preterm births^{16,17}.

Large-scale implementation of calcium supplementation during pregnancy is an example of

the type of effective nutritional intervention that needs to be introduced immediately in populations with low calcium intakes¹⁶. Reducing the incidence of low birth weight requires a comprehensive global strategy, which must include multiple elements: improving maternal nutritional status; treating pregnancy-associated conditions such as pre-eclampsia; and providing adequate maternal care, perinatal clinical services and social support.

Actions to drive progress in reducing low birth weight

Affordable, accessible and appropriate health care is critical for preventing and treating low birth weight. Reductions in neonatal morbidity and mortality will only be achieved if pregnancy care is fully integrated with appropriate neonatal and post-neonatal medical and nutritional care for preterm and small for gestational age infants. Evidence is growing on recommendations for nutritional and medical care for high-risk infants (see Box 1)^{18,19}.



Gates/Frederic Courbet

Maternal anaemia also has an impact on the risk of low birth weight, preterm birth and perinatal or neonatal mortality in low- and middle-income countries. In low-income countries, 25% of low birth weight was attributable to maternal anaemia during pregnancy²⁰. Data from WHO provide strong evidence that even short-term nutritional improvement (during intrauterine life and childhood) could result in increased lifetime growth potential. In just one generation, short-term nutritional improvements can lead to a mean gain in adult height that is up to 8 cm (3.15 in) greater than that of their parents¹¹. In other words, in low- and middle-income countries, transgenerational improvements in height are achieved more quickly if women of reproductive age have adequate health and nutrition. This is important, because maternal height is a key indicator for identifying populations at high risk for

low birth weight, small for gestational age babies, obstructed labour and impaired postnatal growth and development.

Box 1 presents effective interventions for reducing the incidence of low birth weight and its components²¹⁻²³. They are distributed according to the likelihood of being implemented at a certain level (i.e. global, country or regional) and their specificity for selected subgroups of women. The majority of the interventions summarized in Box 1 can be introduced in health-care and nutrition services, using the maternal and perinatal platforms, and focused on universal routine antenatal care with fetal and infant-child growth monitoring. This list includes evidence-based interventions and treatments and is a starting point for countries or regions that wish to initiate or expand large-scale programmes to reduce the incidence of low birth weight.

Box 1: Evidence-based interventions to prevent low birth weight, its components (preterm birth and small for gestational age) and their associated morbidity and mortality, with emphasis on community settings²²⁻²⁵

Interventions at country/regional level

- Support for women's empowerment and educational attainment
- Social protection systems (e.g. cash-transfer programmes) for improving health-care visits
- Food-distribution systems for subpopulations at risk of food insecurity
- Improvement of clean and adequate water, sanitation and hygiene
- Support for national salt iodization programmes to ensure that salt consumed by households is adequately iodized (for which there are new guidelines harmonizing iodine levels with reductions in salt consumption²⁶)
- Improvement in facility-based perinatal care in regions with low coverage
- Universal simplified perinatal data-collection system with electronic feedback systems

Interventions at community level

- Adequate nutrition for adolescent girls
- Promotion of smoking cessation during and after pregnancy
- Community-based packages of care to improve linkage and referral for facility births
- Intermittent iron and folic acid supplements for women of reproductive age and adolescent girls, in settings where the prevalence of anaemia is 20% or higher
- Prevention of malaria during pregnancy

Pre-pregnancy interventions

- Birth spacing
- Peri-conceptional daily folic acid supplementation for reduction of congenital anomalies
- Promotion of smoking cessation

Antenatal care interventions for all women

- Fetal growth monitoring and neonatal size evaluation at all levels of care, integrated into the WHO new antenatal care model²⁷
- Daily iron and folic acid supplements for women during pregnancy
- Decrease in non-medically indicated caesarean delivery and induction
- Promotion of smoking cessation

Postnatal care interventions to all women

- Early initiation and promotion of exclusive breastfeeding at community and facility level
- Adequate birth spacing

Antenatal care interventions to selected women

- Balanced protein-energy supplementation
- Daily calcium supplementation for women in settings with low calcium intake
- Uterine cervical cerclage (or cervical stitch) in women with previous preterm birth and short cervix
- Antiplatelet agents before 16 weeks for women at risk of pre-eclampsia
- Progesterone therapy for women at risk of preterm birth
- Antenatal single-dose corticosteroids for accelerating fetal lung maturity in women in early initiation of labour
- Antibiotic treatment for women with bacterial vaginosis and asymptomatic bacteriuria
- Interventionist care in severe pre-eclampsia before term

Besides improved access to and quality of care, other determinants of low birth weight have to be addressed^{28,29}. Culturally appropriate care and gender-sensitive interventions are essential to reach women who face greater barriers in access to health care. The implementation of evidence-based interventions to tackle low birth weight will be more effective and have a greater impact on health equity if implementation is fuelled by collaboration among programmes and sectors. All programmes should be cognisant of the beliefs and preferences of women with respect to their health, the unbalanced gender relations and

power distribution between women and men, and the inequalities between groups of women with respect to race, ethnicity and residential segregation²⁸⁻³².

The scale-up of interventions should be a rigorous and evidence-based process, whether it is the expansion of a pilot or small project, or the intensification and enlargement of a major programme. Scaling up should imply deliberate efforts to increase the impact of successfully tested innovations³³, so that more populations can benefit from these impacts.

World Health Organization Nutrition Tracking Tool

To assist countries in setting national targets to achieve the global goals – and tracking their progress toward them – the WHO's Department of Nutrition for Health and Development and partners have developed a web-based tracking tool that allows users to explore different scenarios to achieve the rates of progress required to meet the 2025 targets. The tool can be accessed at www.who.int/nutrition/trackingtool.

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