Reduction of Low Birth Weight: A South Asia Priority
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Cover Photo: Young mother feeding her malnourished child
Photo: Miriam Krantz/UNICEF-RO SA

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Why is Reducing Low Birth Weight a Priority?

Each year between 15 and 30 million infants - up to 20 percent of all infants, are born with a low birth weight (LBW). LBW is defined as a birth weight less than 2.5 kg. LBW infants are at risk of:

- A 40-fold greater chance of dying in the neonatal period.
- A 50 percent greater chance of serious development problems, e.g. learning disabilities and mental retardation.
- IQ Point decrease of 5-10 points.
- Long term disabilities, including visual and hearing impairments.
- Illnesses associated with cardiovascular disease and diabetes in later life.
- Premature death.

Despite the magnitude of the problem, little has been done during the past decade to resolve it.

The Prevalence of LBW in South Asia

<table>
<thead>
<tr>
<th>Countries</th>
<th>Percent Prevalence</th>
<th>Number of Infants/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>20</td>
<td>228,000</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>50</td>
<td>1,752,000</td>
</tr>
<tr>
<td>Bhutan</td>
<td>15</td>
<td>11,400</td>
</tr>
<tr>
<td>India</td>
<td>21.8</td>
<td>8,081,000</td>
</tr>
<tr>
<td>Maldives</td>
<td>18</td>
<td>2,000</td>
</tr>
<tr>
<td>Nepal</td>
<td>30-50</td>
<td>235,800 - 393,000</td>
</tr>
<tr>
<td>Pakistan</td>
<td>25</td>
<td>1,337,000</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>18</td>
<td>59,000</td>
</tr>
<tr>
<td>Total:</td>
<td>28</td>
<td>11,800,000</td>
</tr>
</tbody>
</table>

What are the causes of LBW?

- Premature birth - infant born before term or less than 37 weeks gestation.
- Intra-uterine growth retardation - a condition where foetal growth has been constrained.
• Maternal malnutrition - including vitamin A, iron, folic acid, zinc deficiencies.
• High maternal blood pressure.
• Multiple births.
• Teenage pregnancy.
• Inadequate rest and continued hard work during pregnancy.
• Stress, anxiety and other psychological factors.
• Smoking during pregnancy and exposure to second-hand smoke.
• Acute and chronic infection during pregnancy - such as malaria, bacterial vaginosis, etc.

LBW Reduction on the Global Agenda

- **The World Summit for Children**\(^{10}\) - New York, September 1990: 71 Heads of State and Government and 88 other senior officials pledged to reduce the rate of LBW (less than 2.5 kg) to less than 10 percent of 1990 levels by 2000.

- **WHO-Safe Motherhood Initiative (SMI)**. Established in 1987 to draw attention to dimensions and consequences of poor maternal health in developing countries and to mobilize action to address high rates of death and disability caused by the complications of pregnancy and childbirth. International commitments to SMI were made in seven meetings during 1990’s, including reduction of LBW.

- **World Health Day**\(^{11}\), 7 April 1998: Contribution of poor maternal health and nutrition to incidence of LBW of 20 million infants recognised.

- **Administrative Committee on Coordination Sub-committee on Nutrition (ACC/SCN)** - Geneva, April 1999 and Washington D.C, April 2000: **Working Group on Prevention of Foetal and Infant Malnutrition, Its Consequences and Life-Cycle Causes** was established in April 1999. Agreed on plan to identify best practices, improve the design of LBW reduction programmes, and develop interagency proposals to support programmes addressing LBW.
• **Working Group on Prevention of Foetal and Infant Malnutrition** met again in April 2000. Discussed details of study protocols, including study designs, indicators and other issues. 2000-2001 workplan includes establishment of a secretariat at the Institute of Child Health, University of London that will collect new knowledge for periodic electronic dissemination to members and/or presentation ACC-SCN.

What is UNICEF doing globally?


• **WHO/UNU/UNICEF Workshop on Composition of a Multiple Micronutrient Supplement for Pregnant and Lactating Women in Developing Countries** - UNICEF-NYHQ: July 1999. Outcome: Supplement composition was finalised. Target groups include pregnant and lactating women, young children, and non-pregnant women, especially adolescent girls.

Outcome: Programming for improved women's rights, including women's nutrition will involve: 1) advocacy for increased investment in health/nutrition, including nutrition for women throughout the life-cycle; 2) detailed national plans of action; 3) short- and long-term strategies including supplementation, food diversification, behaviour change interventions, and fortification; and 4) comprehensive analysis of the situation, design of technical programme interventions, trials during 2000-2003, and policy recommendations and expansion.

  Outcome: discussed efficacy and effectiveness issues of LBW Pilot Programmes.

  Outcome: reviewed LBW reduction through a life-cycle approach; recommendations on trials were made.

- **UNICEF LBW Pilot Programmes established in 11 countries** (Bangladesh, China, India, Indonesia, Madagascar, Mozambique, Nepal, Pakistan, Philippines, Tanzania, Vietnam) totaling US $3.3 million. In South Asia - US $1 million: Bangladesh - US $400,000; India - US $200,000; Nepal - US $200,000; Pakistan - US $200,000.
  - Objective: to improve birth weights through multi-micronutrient supplementation.
  - Core indicators:
    1) Birth weight within 24 hours.
    2) Maternal weight gain - 4 measurements taken during pregnancy using the UNIscale.
    3) Nutritional anaemia status (haemoglobin levels) at enrolment and just before delivery.
    4) Multiple micronutrient supplement acceptability.
What is UNICEF Doing in South Asia to Reduce LBW?

UNICEF-Regional Office for South Asia (UNICEF-ROSA)

- 2001-2004:
  - South Asia Low Birth Weight (SA LBW) Network strengthened and expanded.
  - SA LBW Reduction Consultative Group established in February 2001 and follow-up provided for LBW Reduction Pilot Programmes until end 2002.
  - LBW Pilot Programmes reported on at ACC/Sub-Committee on Nutrition meeting in Nairobi - April 2001.
  - Links between adolescent's and women's nutrition, nutritional anaemia, LBW, safe motherhood and maternal mortality reduction, and basic education outcomes identified and documented by end 2001.
  - South Asia behavior change intervention (BCI) strategies and programmes for adolescent's and women's nutrition, nutritional anaemia and LBW developed and coordinated in 2001, for implementation in 2002-2004.
  - Operational research planned and initiated in Nepal and India on adolescents' and women's nutrition, nutritional anaemia, and LBW reduction.

What is UNICEF doing in South Asia?

Afghanistan

- No LBW programme, but SMI was revitalised in 2000 and includes LBW incidence monitoring; SMI training package for health workers in the SMI focused provinces has been developed.
Bangladesh

- Programme effectiveness study: "Impact of energy and protein food supplementation of rural Bangladesh pregnant women on the birth weight of their newborns" in two sub-districts, in final phase of National Nutrition Project, implemented through Bangladesh Rural Advancement Committee.
- Efficacy study: "Combined Interventions to Promote Maternal and Infant Health", in International Centre for Diarrhoeal Diseases Research, Bangladesh field site district16: to evaluate four combined interventions among 5000 undernourished women.

Bhutan

- No LBW programme has been initiated.

India

- Efficacy Study: "The Efficacy of a Multi-micronutrient Capsule (MMC) in Reducing LBW and Anaemia/vitamin A Deficiency in Pregnancy: a Randomized Double-blind Controlled Trial", has been implemented at 1-2 Calcutta hospitals from December 2001 with objective to measure the effect on birth weight of supplementing pregnant mothers with MMC, in comparison to iron-folate supplementation.
- Nutrition Project: "Accelerating Reduction of LBW and Malnutrition Using a Life-cycle and Community Based Approach: A District Based Initiative", June 1999 - December 2002; will develop and test a district based strategy for achieving key nutrition, health and sanitation goals using a life-cycle approach through an inter-sectoral civil society partnership; implemented by Government of West Bengal and Child in Need Institute (CINI)17.

Maldives

- No LBW programme, but UNICEF-assisted programme, health and well-being of children aims to reduce LBW from 20% to 10% by end 2002.
Nepal

- Decentralised Planning for the Child Programme (DPCP) with His Majesty's Government of Nepal: community-based programme, aimed at improved care for children for better survival, growth and development, presently operating in 13 districts. Special efforts will be made in 4 districts to improve care for women in order to reduce the incidence of LBW and to gain programmatic/operational experience in expanding activities to all DPCP areas. UNICEF-Nepal has been contributing to global LBW reduction initiative by supporting two studies: the district-based JHU Nepal Nutrition Intervention Project (NNIPS-3), and hospital-based Institute of Child Health (ICH)-MIRA multi-micronutrient supplementation/ LBW project.

Pakistan

- "Pakistan Maternal Micronutrient Supplementation to Prevent LBW Project", aimed at evaluating the public health benefit of improving nutrition and reducing micronutrient deficiencies as interventions for preventing LBW in urban and rural populations, implemented by Aga Khan University; King Edwards' Medical College, UNICEF, and University of California-Davis.

Sri Lanka

- LBW and Neonatal Morbidity and Mortality Study in 1992 provided useful insights into factors which influence birth weight, e.g. regular weighing of pregnant mothers, proper nutrition and additional caloric intake, passive inhalation of cooking smoke, and certain "risk factors" in pregnancy.
- National Nutrition Week - 1999 on "Better Birth Weight, Better Life", resulted in a review of Sri Lanka's existing system for monitoring weight gain during pregnancy, in order to improve LBW.
- Participatory Nutrition Improvement Project (PNIP): community-level LBW monitoring conducted at sentinel sites; training modules, handbooks and Nutrition Fact Book developed for the promotion of LBW prevention.
1. WWW.UNICEF.org, Afghanistan; Pakistan: 1999.
3. Hospital-based figure for Bhutan; India.
Bhutanese woman taking care of her great-grandchild