

## Millennium Development Goals and Child Undernutrition

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Reduction in prevalence of underweight children (under five years of age) has been included as an indicator for one of the targets to eradicate extreme poverty and hunger (Goal 1) of the Millennium Development Goals (MDGs). The most recent MDG report of 2012 indicates that the target of reducing extreme poverty by half has been reached five years ahead of the 2015 deadline but close to one third of children in Southern Asia were underweight. In India, at the historical rate of decline the proportion of underweight children below 3 years, required to be reduced to 26% by 2015, is expected to come down only to about 33%. With barely 3 years left for achieving MDGs, the level of commitment to reduce child undernutrition needs to be gauged and effectiveness of current strategies and programmes ought to be reviewed. Undernutrition in children is not affected by food intake alone; it is also influenced by access to health services, quality of care for the child and pregnant mother as well as good hygiene practices. Would the scenario be different if child undernutrition was a part of Goal 4 of MDGs? What difference it would have made in terms of strategies and programmes if reduction in undernutrition in children under five was a target instead of an indicator? It is time for nutrition to be placed higher on the development agenda. A number of simple, cost-effective measures to reduce undernutrition in the critical period from conception to two years after birth are available. There is a need for choosing nutrition strategies relevant in Indian context. Experiences from other countries should lead India toward innovative nutritional strategies to reduce under five undernutrition in the country- that too on a fast track.

**Key words:** *Child survival, Millennium Development Goals, Under five children, Undernutrition.*

At the dawn of a new millennium, in September 2000, United Nations Millennium Declaration was the main document of the Millennium Summit of the United Nations. It contained a statement of values, principles and objectives for the international agenda for the twenty-first century. It also set deadlines for many collective actions. Under the framework of Millennium Development Goals (MDGs) 147 heads of State and Government, and 189 nations made a promise to free people from extreme poverty and multiple deprivations [1]. Millennium Declaration is a historical event because it is not just a written promise by the member states to achieve eight international development goals by the year 2015, but it describes achievable goals and 'realistic' targets to accomplish these goals [2].

Whereas the goals and targets are clearly spelled out in the United Nations Millennium Declaration (UNMD), development of new strategies and implementation of programs to achieve these targets remain the responsibility of the countries. Therefore, precise monitoring mechanisms have been put in place, in form of national Millennium Goals reports and the Secretary General's reports to the General Assembly. Civil society organizations around the world are creating their own set of reports as well, to ensure that governments are held

responsible to the highest possible standards of performance.

### CHILD UNDERNUTRITION AND FOOD SECURITY

Child undernutrition on account of stunting, severe wasting, and intrauterine growth restriction together are reported to be responsible for 2.2 million deaths and 21% of disability-adjusted life-years (DALYs) for children younger than 5 years [3]. Twelve years after Millennium declaration nearly one in five children under age five in the developing world is underweight [4]. In India, the national trend of the proportion of underweight children below 3 years of age shows that we are going slow in eliminating undernutrition. From estimated 52% in 1990, the proportion of underweight children below 3 years, required to be reduced to 26% by 2015, is expected to come down to about 33% [5].

Reduction in proportion of children under age five who are underweight has found a place in MDGs as one of the indicators of target 1C (halve, between 1990 and 2015, the proportion of people who suffer from hunger) under Goal 1 (eradicate extreme poverty and hunger) [2]. Assigning child undernutrition to Goal 1 of the declaration raises a question that child undernutrition is not affected by food intake alone; it is also influenced by access to health services, quality of care for the child and pregnant mother

as well as good hygiene practices. Nutrition in children is also influenced by a host of sociocultural determinants and adversely affected by common childhood morbidities. Considering the ecology of undernutrition; one wonders whether reduction of undernutrition in under-five children should have been prioritized under child health (Goal 4) as well as/ or included under eradication of extreme poverty and hunger (Goal 1).

World over, lots of efforts have been made during the last decade to tackle undernutrition using strategies and programs primarily aimed at reducing extreme poverty and hunger. The road map towards the implementation of the United Nations Millennium Declaration (UNMD) outlines potential strategies for action that are designed to meet the goals and commitments made by the Millennium Declaration. Strategies, based on “best practices” for moving forwards to achieve Goal 1 of UNMD, include economic and social initiatives that focus on poverty reduction, capacity-building for poverty assessment, monitoring and planning, ensuring that food, agricultural trade and overall trade policies are conducive to fostering food security for all through a fair and just world trade system and continuing to give priority to small farmers [6]. However, one doesn't find any specific strategy in the road map which can directly facilitate reduction in proportion of children under age five who are underweight.

Like many other countries, lot of efforts directed at eradication of poverty and hunger have been made in India during first twelve years of the millennium. Several anti poverty programs related to food security, education, employment opportunities, self employment, insurance security, low cost housing and all round development of rural poor have been launched with government of India support. Mahatma Gandhi National Rural Employment Guarantee Scheme (NREGS) [7] is the latest, launched in 2006 to provide legal guarantee for 100 days of wage employment to every household in the rural areas of the country each year.

Within the ambit of Article 21 of the Constitution of India, the Supreme Court of India has laid down that the right to food is a fundamental requirement that falls under the right to life [8]. Since Independence, many programs and initiatives by the Government have evolved to eliminate hunger in the country. Attempts at ensuring food security have been made by improving availability of food in the public distribution system and the market. Mid-day meal Scheme, Integrated Child Development Services (ICDS) Scheme, Annapurna Scheme and Targeted Public Distribution Scheme (TPDS) have had success in several states in India in addressing the needs of poor households [9].

There is no disagreement that a close relationship exists between child undernutrition and issues of poverty and hunger in general and a positive impact of hunger and poverty alleviation on nutritional status of children. Undernourished children across the world have benefitted by these anti-poverty and food security programs. Children were among thousands who benefited from *Fome Zero* (“Zero Hunger”), a national effort to eliminate hunger in Brazil and there was a definite reduction in health facility visits for poverty related health problems due to a national anti-hunger program that gave children three meals a day [10]. But the question remains whether these ‘secondary gains’ are adequate enough to respond to a challenging problem like child undernutrition?

Is it logical to look at undernutrition as one of the common childhood illnesses and include it under MDG 4. If yes, what would it mean in terms of implementation of programs and specific interventions. Would it be different than what it is at present?

#### **MDGs - REDUCTION IN CHILD UNDERNUTRITION AN INDICATOR AND NOT A TARGET**

The framework of MDGs comprises of achievable goals and ‘realistic’ targets. Indicators significantly reflect the outcome and contribute to monitoring of inputs towards achieving goals. One can debate whether undernutrition in under-five children should have been considered as a ‘target’ instead of an indicator. The target of reducing extreme poverty by half has been reached five years ahead of the 2015 deadline but hunger remains a global challenge. In the developing regions, the proportion of children under age five who are underweight declined from 29 % in 1990 to 18% in 2010. However, progress in reduction of under-five undernutrition is insufficient to reach the global target by 2015 [4]. This raises a question whether national governments would have conceived different strategies and launched more effective programmes if “halve, between 1990 and 2015, the proportion of under-five children with undernutrition” was one of the targets of Goal 1 or Goal 4.

An equally important indicator of overall child health and nutritional status is stunting, which often goes unrecognized in the developing world. More common than being underweight, stunting also more accurately reflects nutritional deficiencies and illnesses that occur during the early-life period, and are likely to hamper growth and development. Although the prevalence of stunting fell from an estimated 44 per cent in 1990 to 29 per cent in 2010, millions of children remain at risk for diminished cognitive and physical development resulting from long term undernutrition [4]. Stunting did not find a place in the MDG framework and remains neglected.

### CURRENT STATUS OF CHILD UNDERNUTRITION

The most recent MDG report of 2012 indicates that close to one-third of children in Southern Asia were underweight [4]. Eighty percent of the world's undernourished children live in just 20 countries including India. Intensified nutrition action in these countries is believed to lead to achievement of the first Millennium Development Goal (MDG1) and greatly increase the chances of achieving goals for child and maternal mortality (MDGs 4 and 5).

Although addressing general deprivation and inequity would continue to result in substantial reductions in undernutrition and should be a global priority, major reductions in undernutrition could be made through programmatic health and nutrition interventions [3]. Some of the known simple cost-effective measures delivered at key stages of the life cycle, particularly from conception to two years after birth, could greatly reduce undernutrition. These measures include improved maternal nutrition and care, breastfeeding within one hour of birth, exclusive breastfeeding for the first six months of life, and timely, adequate, safe, and appropriate complementary feeding and micronutrient intake between 6 and 24 months of age. There is no doubt that evidence based effective interventions are available for improving child nutrition, but the question remains as to how these interventions are delivered to the vulnerable population? To what extent these interventions have been intensified through various programs after the countdown for MDGs has begun?

India has about half the world's undernourished children despite modest reduction of poverty in the country. Examination of recent evidence on nutrition in India suggests that there is a sustained decline in per-capita calorie consumption during the last twenty five years or so and the decline is not limited to calories but also applies to proteins and many other nutrients [11]. According to the most recent NFHS data, there has been virtually no change in the proportion of underweight children between 1998-99 and 2005-6 (NFHS-1 and 3). So the question comes up, to what extent target 1C of Goal 1 relates to reduction of undernutrition in children?

#### ***Child Undernutrition - A Multifaceted Public Health Problem***

Child undernutrition is a multifactorial public health problem which requires focussed attention and coordination across sectors. Children are underweight due to a combination of factors: lack of quality food, suboptimal feeding practices, repeated attacks of infectious diseases and pervasive undernutrition. Lack of flush toilets and other forms of improved sanitation which might result in repeated bouts of diarrheal disease and

high prevalence of low birthweight babies are contributory factors. A six state assessment of social determinants of undernutrition reveals that apart from food security, the critical social determinants of undernutrition in India are inadequate and inappropriate feeding practices, limited time for mothers/ care givers for food preparation and feeding, marketing of commercial ready-to-eat food, and inadequate responsiveness of government programmes and schemes to address child nutrition (INCLLEN study - personal communication).

Existing programs and schemes specifically focused on undernutrition in children, like Mid-Day Meal Scheme and Integrated Child Development Services (ICDS) Scheme, are continuing without intensification or scaling up. Infant and Young Child Feeding (IYCF) strategy has a potential to effectively prevent undernutrition. Integrated Management of Neonatal and Childhood Illness (IMNCI) strategy includes early detection and management of undernutrition in children younger than 5 years. However, due to slow pace of implementation and limited coverage of health programs guided by these strategies, no visible impact is seen on reduction of number of under-five children with undernutrition.

Special interventions have been introduced to identify and manage children with severe acute malnutrition (SAM) in order to combat death and disability as a consequence of undernutrition. WHO guidelines are widely used for the identification of 6-60 months old infants and children for the management of SAM children [12]. Under National Rural Health Mission, Nutrition Rehabilitation Centers (NRCs) have been set up at health facilities in many districts in India with the intention to improve the quality of care being provided to children with SAM and to reduce child mortality [13]. But limited scope of performance directed at the tip of iceberg does not help in reducing the number of under-five children with underweight. All of these programs have potential, but they do not form a comprehensive nutrition strategy, and they have not addressed the nutrition problem effectively so far.

Child undernutrition is not just a nutritional problem. It needs to be seen in the backdrop of child health in general with specific focus on common childhood illnesses. Despite clear evidence of the disastrous consequences of childhood nutritional deprivation in the short and long terms, nutritional health remains a low priority. The approach ought to be focused on growth and development, and child survival. Unless concerted efforts are made to reduce child undernutrition, its importance would be diluted by overarching goals and targets.

## THE WAY FORWARD

Child undernutrition continues to be a major child health problem with barely three years left for achieving MDGs. Since there is no possibility of further modifications to the indicators, targets, or goals before the end of the MDG period in 2015, the efforts need to be channelized towards finding ways to scale-up already known effective interventions against child undernutrition. It is time for nutrition to be placed higher on the development agenda. A number of simple, cost-effective measures to reduce undernutrition in the critical period from conception to two years after birth are available. Urgent, accelerated and concerted actions are needed to deliver and scale-up such interventions so as to extend the gains made thus far.

The period from pregnancy to 24 months of age is a crucial window of opportunity for reducing undernutrition and its adverse effects. Program efforts, as well as monitoring and assessment, should focus on this segment of the continuum of care. It was not long ago when United Nations Secretary General joined a group of leaders in pledging to do more to address the global burden of undernutrition. The group set the ambitious target of substantially reducing undernutrition during the most vulnerable 1,000-day period of a child's life, from pregnancy to the age of two. Nineteen countries have joined the Movement for Scaling Up Nutrition (SUN). The commitment and leadership of national stakeholders is the heart of the SUN Movement. Efforts to scale-up nutrition in SUN countries are driving global progress. Building on the Sun framework, countries tailor efforts to meet local needs and capitalize on opportunities to maximize cross-sector resources, while establishing the foundation for a long-term commitment to nutrition [14]. So far India is not one of the SUN countries.

There is definitely a need for choosing nutrition strategies relevant in Indian context. Experiences from other countries, like multisectoral actions with emphasis on service-oriented nutrition policies (Indonesia) or mobilization-oriented nutrition policies (Thailand), should lead India toward innovative nutritional strategies in order to reduce underfive undernutrition in the country – that too on a fast track.

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## REFERENCES

1. Assembly, U.N.G., United Nations Millennium Declaration: Resolution adopted by the General Assembly. 55/2. 18 September 2000. United Nations;

- New York. 2000.
2. Millennium Development Goals Indicators. Official list of MDG indicators. United Nations Statistics Division, Department of Economic and Social Affairs, United Nations, January 2008. Available at: <http://unstats.un.org/unsd/mdg/host.aspx?content=indicators/officiallist.htm>. Accessed on 10 January, 2013.
3. Black R, Allen LH, Bhutta ZA, Caulfield LE, de Onis M, Ezzafi M, *et al*. Maternal and child undernutrition: global and regional exposures and health consequences. *Maternal and Child Undernutrition* 1. *Lancet*. 2008;371:243-60.
4. Millennium Development Goals Report 2012. New York: United Nations; 2012.
5. Millennium Development Goals- India Country Report. Ministry of Statistics and Programme Implementation. New Delhi: Government of India; 2011.
6. Road map towards the implementation of the United Nations Millennium Declaration. Report of the Secretary-General. Fifty-sixth session. Item 40 of the agenda. New York: 6 September, 2001, United Nations; 2001.
7. Rural Employment Guarantee Scheme. The Mahatma Gandhi National Rural Employment Guarantee Act. Ministry of Rural Development, Govt. of India. New Delhi. Available at: <http://nrega.nic.in/netnrega/home.aspx>. Accessed on 10 January, 2013.
8. Supreme Court orders on the right to food. A tool for action. New Delhi: Second Edition. Right To Food Campaign Secretariat; 2008.
9. Economic Survey 2007-2008. Union Budget and Economic Survey. Ministry of Finance. Government of India. New Delhi. 2008. Available at: <http://indiabudget.nic.in/es2007-08/esmain.htm>. Accessed on 10 January, 2013.
10. Galindo RW. Fighting Hunger in Brazil. *Perspectives in Health - The magazine of the Pan American Health Organization*. 2004. Available at : [http://www.paho.org/english/dd/pin/Number20\\_article05.htm](http://www.paho.org/english/dd/pin/Number20_article05.htm). Accessed on 10 January 2013.
11. National Sample Survey Organization. Nutritional intake in India 1999–2000. New Delhi: Ministry of Statistics and Program Implementation, Government of India, August 2001.
12. World Health Organization. WHO Child growth standards and the identification of severe acute malnutrition in infants and children. Geneva: WHO/ UNICEF; 2009.
13. Operational Guidelines on Facility Based Management of Children with Severe Acute Malnutrition. New Delhi: Ministry of Health and Family Welfare, Government of India; 2011.
14. Scaling Up Nutrition (SUN) Movement Strategy (2012-15). September 2012. Available at: <http://scalingupnutrition.org/wp-content/uploads/2012/10/SUN-MOVEMENT-STRATEGY-ENG.pdf>. Accessed on 10 January, 2013.