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Public Health Nutrition Programmes in Odisha: A Conceptual Approach to Assessment of Intervention

Subject: Medicine

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ABSTRACT

Undernutrition is a global issue. India ranks second in world of the number of children suffering from malnutrition. Odisha, located in the eastern zone of India, shares about 8% of the total undernutrition burden of the Country. Despite of severl flag-ship progarmme interventions by the Government of India and the State government of Odisha, undernutrition especially amongst 0-6 years childern has not shown any significant decline over last five decades. This paper analyzes the existing public health nutrition interventions in the State using the coneptual framework of UNICEF and provides future directives for generating evidences towards setting programme and policy objectives.

KEYWORDS: Under nutrition, Nutrition Interventions, Odisha, Determinants, Objective Setting

INTRODUCTION

Access to adequate food and nutrition is among basic human rights and yet the Global Burden of child undernutrition remains substantial. Although the share of children who are malnourished has gradually been declining over the past 25 years, the actual number of malnourished children is still rising in many countries, including India1.

Worldwide, underweight prevalence is projected to decline from 26.5% in 1990 to 17.6% in 2015, a decline of 34% or, in terms of levels, a decline from 163.8 million to 113.4 million. 2 In developed countries, the prevalence is estimated to decrease from 1.6% to 0.9%. For developing regions, the decline is forecasted from 30.2% to reach 19.3%. In Asia, the forecast is to detect a decrease from 35.1% to 18.5%, a significant change of 47%.3

The World Bank estimates that India is ranked 2nd in the world of the number of children suffering from malnutrition, after Bangladesh, where 47% of the children exhibit a degree of malnutrition. The prevalence of underweight children in India is among the highest in the world, and is nearly double that of Sub-Saharan Africa with dire consequences for morbidity, mortality, productivity and economic growth. The UN estimates that 2.1 million Indian children die before reaching the age of 5 every year - four every minute - mostly from preventable illnesses such as diarrhea, typhoid, malaria, measles and pneumonia. Every day, 1,000 Indian children die because of diarrhea alone. 4

Odisha contributes to about 8% of the total burden of malnutrition in the Country. The Prevalence of malnutrition amongst under-five is 41% in Odisha as compared to the National average of 40%, which takes into account both acute and chronic malnutrition. Out of total of 30 Districts in Odisha, malnutrition is a major public health problem in eleven KBK Plus districts (Koraput, Bolangir, Malkanagiri, Nuapara, Gajapati, Kalahandi, Nawarangpur, Sonepur and Kandhamal, Boudh and Rayagara) that accounts for more than 50% of the total caseload of the State.5 The latest IMR data as published by SRS (2008) is 67 for Odisha as against the national average of 58.6

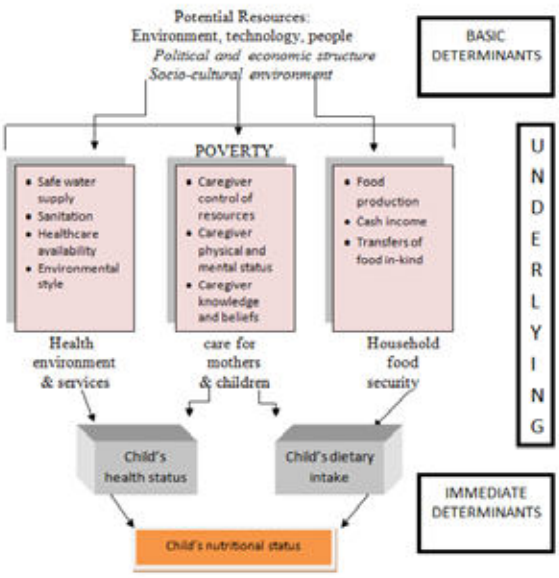
Even though there is no District-wise IMR data available, reports from routine Health Management Information System (HMIS) of NRHM indicate that the above eleven Districts report maximum number of under-five deaths in Odisha. This could be partly attributed to the high burden of malnutrition prevalent in these districts.7

THE CONCEPTUAL FRAMEWORK

The study draws on the conceptual framework (Figure 1) of UNICEF for the Causes of Child Malnutrition (UNICEF 1990, 1998) and the subsequent extended model of care presented in Engle, Menon, and Haddad (1999). The framework is comprehensive, incorporating both biological and socioeconomic causes of malnutrition, and also encompasses causes both at the macro and micro levels. It recognizes three levels of causality corresponding to immediate, underlying, and basic determinants of child nutritional status.

First, the immediate determinants of child nutritional status manifest themselves at the level of the individual human being. They are dietary intake (energy, protein, fat, and micronutrients) and health status. These factors themselves are interdependent. A child with inadequate dietary intake is more susceptible to disease. In turn, disease depresses appetite, inhibits the absorption of nutrients in food, and competes for a child's energy. Dietary intake must be adequate in quantity and in quality, and nutrients must be consumed in appropriate combinations for the human body to be able to absorb them.

Figure 1: Conceptual Framework Guiding Empirical Analysis



Source: Adapted from UNICEF 1990, 1998; and Engle, Menon, and Haddad 1999

Secondly, the immediate determinants of child nutritional status are, in turn, influenced by three underlying determinants manifesting themselves at the household level. These are (i) food security, (ii) adequate care for mothers and children, and (iii) a proper health environment, including access to health services. Associated with each is a set of resources necessary for their achievement. Food security is achieved when a person has access to enough food to lead an active and healthy life. 8Care, the second underlying determinant, is the provision by parents, households and communities of "time, attention, and support to meet the physical, mental, and social needs of the growing child and other household members". 9A final resource for care is the caretaker's knowledge and beliefs. The third underlying determinant of child nutritional status, health environment and services, rests on the availabil-

ity of safe water, sanitation, adequate health care, and environmental safety, including shelter.

A key factor affecting all underlying determinants is poverty. The effects of poverty on child malnutrition are pervasive. Poor households and individuals are unable to achieve food security, have inadequate resources for care, and are not able to utilize (or contribute to the creation of) resources for health on a sustainable basis.

Finally, the underlying determinants of child nutrition (and poverty) are, in turn, influenced by basic determinants (context). The context include the potential resources available to a country or community, which are limited by the natural environment, access to technology, and the quality of human resources. As political, economic, cultural, and social factors affect the utilization of these potential resources, one must examine how they are translated into resources for food security, care, and health environments and services. The political and socio-economic factors provide the space in which policies are designed to precipitate the downstream impact.

OVERVIEW OF CURRENT PUBLIC HEALTH NUTRITION INTERVENTIONS

Nutrition Interventions by the Government for under-six children

Over last one decade, mainly four types of programmatic nutritional interventions have been undertaken by the Government of Odisha. One of the main objectives of these interventions has been to address childhood malnutrition and promote healthy nutrition practices. Those are A) Village Health and Nutrition Day (VHND), also called 'Mamta Diwas' and 'Pustikar Diwas' in many States; B) Integrated Child Development Scheme (ICDS) food supplementation; C) Nutrition Rehabilitation Centre; and D) Integrated Management of Neonatal & Childhood Illnesses. The first three programs are implemented by link workers at the grass root levels: Anganwari workers (AWW), Auxiliary Nurse and Midwife (ANM), Accredited Social Health Activist (ASHA). The ANM is supervised by the Lady Health Visitor (under H&FW Dept.); the AWWs report to the Child Development Project Officer (CDPO). ASHAs work as Health Activists and play the role of community mobilizers and counselors.

A) Village Health and Nutrition Day (VHND) was formally launched in Odisha in February, 2009 under the National Rural Health Mission with provision of monetary incentives for the three tiers of link workers and parents of undernourished children for early identification, timely referral, accompanying the identified cases and efficient management of Grade II, III and IV undernourished children. The programme was designed to be implemented at all the Anganwari Centres (AWCs), each AWC catering to about 1000 population, once a month so that the basket of services, such as, growth montirong, nutritional counseling of parents, food cooking and preparation for 6-12 months infants, Iron Folic Acid (IFA) supplementation for 6 to 60 months children (approximately 80 to 100) could be made available.10

B) Integrated Child Development Scheme (ICDS) was launched by Govt of India in 1975 with the aim of providing nutritional services to children. Interventions for 0-6 yrs age group includes Supplementary Nutrition Programme which is being implemented by the AWW under the Department of Women and Child Development. With a view to improving the health and nutritional status of children in the age group of 6 months to 6 years, pregnant women and lactating mothers, the Supplementary Nutrition Programme has been one of the most important components of the ICDS programme.11

C) Integrated Management of Neonatal and Childhood Illnesses (IMNCI) is another important community based intervention for management of malnutrition. The four pillars of this strategy are case management of undernourished children, health systems strengtheing, intersectoral convergence and community mobilization. IMNCI was implemented in Odisha as a pilot intervention in two districts of Mayurbhanj and Koraput during 2004-05. Subsequently, the strategy was scaled up to cover fourteen more new districts. During last five years of training and implementation of IMNCI, about 17000 Link-Workers have been trained in the State.12

D) Nutrition Rehabilitation Centres (NRC) were established at District Head Quarters Hospitals in selected Districts as pilot intervention from 2009 - 10 in Odisha (NRHM PIP). NRCs are the facility-based interventions for effective rehabilitation of moderate to severe undernourished children. At present NRCs are functional in Mayurbhanj and Kalahandi Districts..

Of the above, as noted, the first three public health nutrition interventions (A,B&C) are being implemented at the community level through Link Workers, while Nutrition Rehabilitation Centres (D) cater to the specially referred children having severe malnutrition for prolonged treatment and care at facility level. This constitutes about 18% of total malnourished children. The community based interventions are being delivered through the network of AWCs and Sub Centres (SCs). As per the Government of India Guidelines, one Sub Centre caters to the population of 5000 in normal areas and about 3000 population in hilly / tribal areas, and there are 34000 functional AWCs and 6688 SCs in the State.

PRIORITIES FOR ACTION

Despite of the ongoing efforts to address malnutrition by both the Department of Health and Family Welfare (H&FW) and the Department of Women and Child Development (WCD), there has not been any significant improvement in the under-five nutritional status in the State. There has not been any systematic assessment of the nutritional interventions, particularly with regard to identification, counseling, process management at community & facility level. The roles and responsibilities of the Link Workers (ANM and AWW), perception and experience of Stakeholders and the extent of intersectoral convergence have not yet been comprehensively studied. Therefore, the need for having an in-depth understanding of current public health nutrition interventions and critically assessing the factors that would shape the principal policy directives toward its implementation, its actual ability to implement the policy at the state, district and panchayat levels, and lastly its ability to reach out to the targeted children, could hardly be overemphasized.

It is pertinent to examine the National and State Policy Framework on the various Determinants of Child Malnutrition and understand the processes of current public health nutrition interventions administered by the Department of WCD and the Department of H&FW. For analyzing the Basic (macro), underlying (meso) and immediate (micro) determinants, a number of salient features of the conceptual framework of UNICEF (Figure I) could be used as a guide. Special focus ought to be given to how these interventions address food security at household level, provision of emergency nutrition & supplementary nutrition, and management of undernourished children at community level (ICDS, VHND and IMNCI) and facility level (NRC).

SETTING OBJECTIVES FOR ASSESSMENT

Systematic assessment of public health nutrition interventions should focus on all three types of determinants with the following objectives:

Basic (Macro) Determinants

Uderstanding and analyzing the policy framework and programme design for under-six Public Health Nutrition Interventions by the National Government and by State Governments of Odisha and Andhra Pradesh, including: stated key policy objectives, assignment of responsibiilties by programme and jurisdictions, relationships and recognised processes of accountability and resource allocation. conducting audit of all under-six public health nutrition interventions which are in operation for last two years in the State of Odisha and Andhra Pradesh and perform a situation analysis. This will result in a synthesis report describing all that is known about the existing interventions and their effectivness.

Related Questions: What are the current intentions, targets and stated strategies for the policies aimed to remedy under six malnutrtion as it applies at different governing bodies (country and down to district levels). What regulatory frameworks are in place to assure that strategies are implemented? How are different programs linked, including links with other sectors such as education?

Underlying (Meso) Determinants

Examining the organizational structure, its functions, integration at various levels (state level as well as panchayat or any other sub-state), including analysis of funds allotment and disbursement, funds-flow and financial accounting practices related to public health nutrition interventions. Understanding the ground realities with regard to roles, responsibilities, perception and experience of stakeholders (again, all levels); involvement of local self government and inter-sectoral convergence in implementation of public health nutrition interventions at community and facility level

Related Questions: How do the programs function at the state and district level to coordinate activities, set targets, answer to stakeholders interests, allocate resources and assure that program reaches its beneficiaries?

Immediate (Micro) Determinants

Assessing the success of ongoing public health nutrition programmes as to how the program reaches children by longitudinally tracking sizeable number of children for about an year (6 to 18 months, so that six months follow through 2 yrs old becomes possible).

Related Questions: Does the program actually reach the children in the specific target groups? Are there any inequalities – with some groups gaining access, and other – being less successful? Do households find that they are able to access what they are entitled to acess through the program? Can a program impact be evaluated in terms of children being reached in the two program districts in the respective states?

THE WAY FORWARD

A systematic assessment of public health nutrition interventions could help design programmes that are effective, reliable and sustainable in the long run. Recommending to the Government of India, the State Governments and Local Self Governments on possible areas of strengthening the existing public health nutrition programmes with a Strategy Framework for better child health outcomes could be the main agenda of such assessments. Summative evaluation of systematic enablers and barriers could potentially address policy issues at the highest level and the consequent policy reforms.

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