



INCENTIVIZING NUTRITION

Incentive Mechanisms to Accelerate Improved Nutrition Outcomes

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Table of Contents

Foreword	5
Acknowledgements	6
Acronyms and Abbreviations	7
Executive Summary	9
Introduction	13
Why nutrition?	
Operational guidance for nutrition incentives	
Part I. Investing in Nutrition: What, Why, and How?	17
What is malnutrition?	
Why does malnutrition matter?	
How does malnutrition affect sectoral objectives?	
Is nutrition a good investment?	
What are the causes and determinants of malnutrition?	
What nutrition-specific interventions work?	
What nutrition-sensitive interventions work?	
When in the life cycle is nutrition critical?	
How has nutrition evolved as a global priority?	
Part II. Financial and Non-Financial Incentives to Enhance Nutrition Results	29
What are financial incentive mechanisms?	
What has been the World Bank’s experience using financial incentive mechanisms for nutrition?	
What is the evidence on the use of financial incentive mechanisms for nutrition?	
How to select nutrition incentive mechanisms?	
Which incentives should be used at what levels?	
Financial Incentive Mechanisms: Strengths and Challenges	
1. <i>Government Level: National and Sub-National</i>	
Development Policy Financing	
Program for Results and Disbursement-Linked Indicators	
Performance Based Budgeting	
2. <i>Health Facility Level</i>	
Performance-Based Financing	
Performance-Based Contracting	
3. <i>Community Level</i>	
Performance-Based Community Contracts and Community Performance Based Financing	
Community-Driven Development	
4. <i>Household / Individual Level</i>	
Conditional and Unconditional Cash Transfers	
Public Works Programs	
Non-Financial Incentives	
Conclusions	67
Annexes	
Annex 1. Evidence Review of Financial Incentive Mechanisms	71
Annex 2. Glossary of Nutrition Terms	80
Annex 3. References	87



Foreword

AT THE WORLD BANK, we view nutrition as a foundational factor of development. Investing in nutrition will contribute to achieving the World Bank’s dual goals of ending extreme poverty and promoting shared prosperity. The coordinated support of the international community is important to optimizing the rising trend in nutrition investment, which was galvanized by the global Scaling Up Nutrition (SUN) movement, and reaffirmed at the 2012 World Health Assembly where world leaders committed to reaching six global nutrition targets by 2025.

The cost of underinvestment in nutrition is immense. Undernourished mothers give birth to chronically ill and cognitively deficient children. Intergenerational malnutrition reinforces the cycle of poverty and prevents countries from reaching their development potential. World Bank President Jim Yong Kim observed that “One of the biggest obstacles to [a] better world is our collective failure to help parents provide adequate nutrition...to children during the first 1,000 days.” Governments must invest in a skilled, healthy, productive workforce to compete in the global digital economy. And that investment needs to start with nutrition in the first 1,000 days of life.

The World Bank is well positioned to advise its country clients on scaling up effective nutrition interventions and to collaborate with partners to coordinate and enhance investments in nutrition. Well-chosen incentives could increase the possibility that countries will succeed in implementing effective nutrition interventions to achieve better outcomes for their populations. Until recently, incentive mechanisms in support of nutrition results have been underutilized.

The report, *Incentive Mechanisms to Accelerate Improved Nutrition Outcomes*—and the accompanying *Practitioner’s Compendium*—provide important guidance for cost-effective multisectoral efforts to scale up nutrition programming by incentivizing nutrition interventions. Financial incentives are one tool to support nutrition interventions. However, incentives need to be carefully chosen, underpinned by a clear theory of change, and designed for particular contexts and objectives. When a decision is taken to use financial incentives, the report and compendium offer operational guidance to task teams and leaders. They highlight the potential challenges and strengths of the various mechanisms, and include country examples and nutrition indicators to monitor progress at the levels where the mechanism would exert its influence, i.e., national, sub-national, facility, community, households, or individuals.

I encourage managers to familiarize themselves with the available mechanisms to incentivize nutrition in operations for country clients—particularly in countries most heavily burdened by malnutrition. Malnutrition is a global crisis causing unnecessary pain, suffering, and economic losses. We must accelerate our response to this global development challenge and become more innovative in our approaches, including in our use of incentives. The World Bank is committed to improving nutrition outcomes in partnership with the international community.

Timothy Grant Evans
Senior Director
Health, Nutrition and Population Global Practice

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Acronyms and Abbreviations

CDD	Community Driven Development	MICS	Multiple Cluster Surveys
CBP	Community-Based Performance	MOF	Ministry of Finance
CCT	Conditional Cash Transfer	MOH	Ministry of Health
CHW	Community Health Worker	MOU	Memorandum of Understanding
EmONC	Emergency Obstetric and Neonatal Care	MSP	Multi-stakeholder Platform
CT	Cash Transfers	NIPN	National Information Platforms for Nutrition
CCT	Conditional Cash Transfers	NGO	Nongovernmental Organization
CPR	Contraceptive Prevalence Rate	PECS	Post-Event Coverage Surveys
DHS	Demographic and Health Surveys	PBB	Performance-Based Budgeting
DLI	Disbursement-Linked Indicators	PBC	Program-Based Contracting
DPF	Development Policy Financing	PBCC	Performance-Based Community Contracts
GMP	Growth Monitoring and Promotion	PBF	Performance-Based Financing
GNR	Global Nutrition Report	PforR	Program for Results
HIV	Human Immunodeficiency Virus	PWP	Public Works Program
HR	Human Resources	RBF	Results-Based Financing
HRH	Human Resources for Health	SBA	Skilled Birth Attendant
IBRD	International Bank for Reconstruction and Development	SDG	Sustainable Development Goals
IDA	International Development Association	SMS	Short Message Service
IPF	Investment Project Financing	SUN	Scaling Up Nutrition
ICDS	Integrated Child Development Services	SWAp	Sector Wide Approach
ITN	Insecticide Treated Nets	UCT	Unconditional Cash Transfer
MCH	Mother Child Health	UHC	Universal Health Coverage
M&E	Monitoring and Evaluation	WB	World Bank
		WBG	World Bank Group
		WHA	World Health Assembly
		WHO	World Health Organization



Executive Summary

Scaling up Nutrition through Incentives

Good nutrition reduces mortality and poverty, improves children's school readiness and performance, and increases a country's shared prosperity and sustainable economic growth. Poor nutrition leads to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and decreased productivity. Intergenerational undernutrition reinforces the cycle of poverty and obstructs development.

Reducing maternal and child malnutrition has become a global development priority driven by the multinational Scaling Up Nutrition (SUN) movement. Increasingly, the international community recognizes nutrition as a vital aspect of health policies. Integrating nutrition within a country's universal health care (UHC) policy is paramount to achieving the right to health for all.

The evidence indicates that a set of highly cost-effective nutrition-specific interventions need to be urgently scaled up to maximize reductions in malnutrition. A sustainable and comprehensive reduction in malnutrition also requires nutrition-sensitive interventions implemented through diverse sectors, including agriculture, education, water and sanitation, the private sector, and social protection. Successful multisectoral nutrition interventions require strong coordination and accountability mechanisms at various levels of governance. An important ingredient for successfully scaling up a country's multisectoral nutrition plans are the right incentives.

The right mix of incentives could increase the possibility that nutrition interventions will be implemented to achieve targeted results, but the systematic use of incentives to achieve nutrition results in World Bank operations remains limited. The World Bank has extensive experience supporting the design, implementation, and evaluation of financial incentive mechanisms, and it is well positioned to use that knowledge to support country clients and collaborate with partners to enhance the efficiency of delivering nutrition interventions.

This report provides operational guidance to World Bank project teams considering including nutrition objectives in projects. It is intended for non-technical staff to support their clients' efforts to enhance the nutritional impact of World Bank country investments. The report provides practical advice to design and implement nutrition interventions in future operations based on

*Good nutrition
reduces mortality
and poverty,
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and increases a
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sustainable
economic growth.*

a review of past successful and less successful attempts. The recommendations are organized by type of financial incentive mechanism, which correspond to the specific levels where the mechanisms exert their influence, i.e., national, sub-national, facility, community, households, or individuals, and also provides information on the use of non-financial incentives.

Why invest in nutrition?

Malnutrition is a driver of poverty. Reducing malnutrition is essential to achieving the World Bank's goals of eliminating extreme poverty and enhancing shared prosperity. Evidence-based nutrition interventions are consistently a high investment priority in economic analyses. Every dollar invested in proven nutrition interventions in developing countries yields about \$18 dollars in economic returns.

A relatively small “window of opportunity” exists during which most of the *damage from malnutrition occurs—damage that is mostly irreversible and detrimental throughout a person's life*. This golden window is referred to as the *first thousand days*—from conception to the end of the first two years of a child's life. To prevent irreversible developmental damage, good nutrition is critical for prospective mothers *well before* pregnancy and conception. A set of cost-effective nutrition-specific interventions have proven highly successful in improving nutrition.

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What are incentive mechanisms?

Incentives motivate individuals to perform an action. Incentives can be classified as financial, moral, coercive or natural / intrinsic. Incentive structures are a central feature of economics and are described as the interaction between a *principal*, who applies the incentive, and an *agent*, who receives the incentive. Greater incentives are assumed to lead to more effort and better performance. Financial incentives can have two kinds of effects: a direct price effect, which makes the incentivized behavior more attractive, and an indirect psychological effect. The psychological effect can reinforce the price effect, but it can sometimes work in opposition to the price effect by crowding out the incentivized behavior.

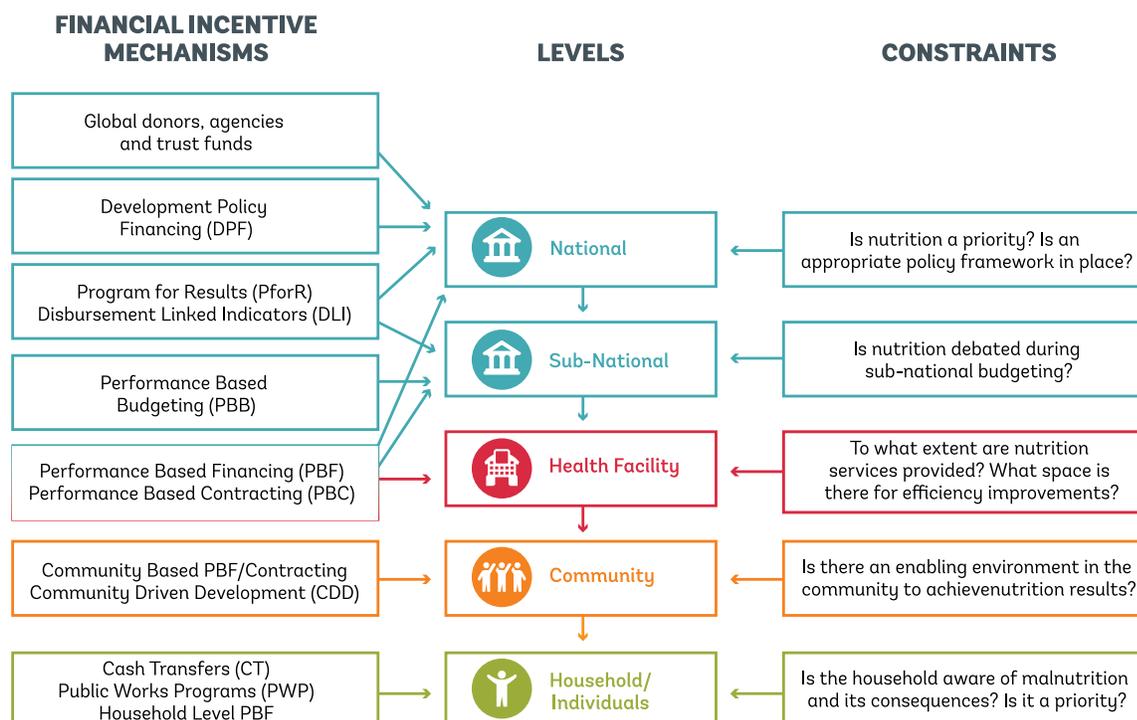
How to select nutrition incentive mechanisms?

Nutrition programs and interventions can be implemented at different levels of the system. When planning a country's nutrition program, the first step is to identify the key nutrition challenges and the different system levels affected to define a theory of change to inform where to focus the effort and what approach or instrument might be most effective. At each level, it is useful to analyze how financial and non-financial incentives are aligned (or not) to either encourage or block actions. Financial and non-financial incentives can have

unintended consequences. Their introduction into operations needs to be carefully considered in each context—when a decision is made to use them.

The World Bank's main instruments and approaches, and the levels at which they are typically used to improve nutrition, are depicted in the figure below. Because the instruments and approaches are results-based and have associated financing, they are effectively financial incentive mechanisms. This report also discusses the importance of non-financial incentives and provides some examples that could be used in nutrition operations.

Financial Incentive Mechanisms Applied at Different Levels



Source: Authors.

Choosing the right nutrition incentives for the right level

Successfully scaling up a country’s multisectoral nutrition plans requires the right incentives, including facilitating effective inter-sectoral collaboration and coordination. The financial and non-financial incentive instruments used effectively in health, education, and social protection programs can be equally effective in achieving behavior change to improve nutrition either as part of broader World Bank operations or as stand-alone nutrition projects or programs.

The use of incentives in World Bank-financed operations to achieve nutrition objectives has been modest to date and deserves more attention. This document explains the various financial and non-financial incentives and at which level they could be used. Explicit indicators should be included to measure nutrition results within the health, agriculture, education, social protection, water and sanitation, and other relevant sector operations. An essential element for the success of incentivized nutrition operations is to identify appropriate indicators and to establish robust systems to monitor and verify results in order to reward good performance promptly.

To assist task-teams and leaders in developing, implementing, and monitoring incentivized programs for nutrition, as well as in incorporating nutrition results in other relevant operations, a Practitioner’s Compendium complements this report. The compendium offers practical information on how to plan incentivized operations for improving nutrition results for World Bank client countries, along with country examples and nutrition indicators for monitoring progress.

۴- آشنایی با اندام‌های بدن
۵- آشنایی با رنگ‌ها
۶- آشنایی با حیوانات
۷- آشنایی با اشیاء
۸- آشنایی با حرف‌ها
۹- آشنایی با اعداد
۱۰- آشنایی با فصل‌ها
۱۱- آشنایی با ماه‌ها
۱۲- آشنایی با روزها



Introduction

Why nutrition?

Good nutrition reduces mortality and poverty, improves children's school readiness and performance, and increases a country's shared prosperity and sustainable economic growth.¹ Poor nutrition leads to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and decreased productivity. Malnourished mothers give birth to sickly and cognitively deficient children. Irreversibly damaged children bear the burden of their malnourishment throughout their lifetimes—unable to contribute their full potential to national development.

Intergenerational undernutrition reinforces the cycle of poverty and obstructs development.² Even though the cycle is not irreversible, a special focus on malnourished mothers is required because they have a higher likelihood of giving birth to malnourished children. Reducing maternal and child malnutrition has become a global development priority driven by the multinational Scaling Up Nutrition (SUN) movement.³ Increasingly, the international community recognizes nutrition as a vital aspect of health policies, requiring multisectoral coordination. Integrating nutrition within a country's universal health care (UHC) policy is paramount to achieving the right to health for all.

A set of cost-effective nutrition-specific interventions have proven highly successful in improving nutrition.⁴ Nutrition-sensitive interventions are typically delivered through health systems

Nutrition-specific:

Interventions that have an immediate and direct impact on maternal, fetal, and child nutrition and development, including adequate food and nutrient intake, feeding, caregiving and parenting practices, and low burden of infectious diseases.

Nutrition-sensitive:

Interventions that address the underlying and basic determinants of maternal, fetal, and child nutrition and development

¹ *Repositioning Nutrition as Central to Development: A Strategy for Large Scale Action*. 2006. Washington, DC: The World Bank.

² H.F. Delisle. 2008. Poverty: the double burden of malnutrition in mothers and the intergenerational impact. *Annals of the New York Academy of Science* 1136: 172–84.

³ See www.scalingupnutrition.org.

⁴ Z.A. Bhutta et al. 2013. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *The Lancet Maternal and Child Nutrition Series* 382: 452–77.

An important ingredient to successfully scaling up a country's multisectoral nutrition plans are the right incentives.

and other programs such as cash transfer programs and community-based approaches. However, a sustainable and comprehensive reduction in malnutrition requires nutrition-sensitive interventions implemented through diverse sectors, such as agriculture, education, water and sanitation, the private sector, and social protection. Successful multisectoral nutrition interventions require strong coordination and accountability mechanisms at various levels of governance countrywide.

An important ingredient to successfully scaling up a country's multisectoral nutrition plans are the right incentives—including effective inter-sectoral collaboration and coordination. The focus on incentives is relatively new in the nutrition field. Even though the international community is clear on *what* needs to be done to reduce malnutrition, *how* to ensure targeted interventions to achieve the intended nutrition impact remains only partially evident. The right incentives could increase the possibility that nutrition interventions *will* be implemented to achieve targeted results.

Most nutrition research has focused on the basic science or the efficacy of interventions in relatively smaller and more controlled projects. Evaluations of larger-scale programs often demonstrate a gap between the nutrition impact of interventions—tested through efficacy studies in controlled settings—and the impact of interventions at the large-scale and programmatic level. Meanwhile, the focus on financial and non-financial incentives has grown considerably in related fields, such as public health and social protection.

The World Bank has an important role to play in support of country clients and in collaboration with partners to enhance the efficiency of delivering nutrition interventions. The World Bank has extensive experience supporting the design, implementation, and evaluation of financial incentive mechanisms. In some cases, incentivizing nutrition outcomes has been a specific focus, but generally, the potential for using incentive mechanisms for nutrition remains underutilized.

Operational guidance for nutrition incentives

This document provides specific operational guidance to World Bank project teams that are considering including nutrition objectives in projects. It is intended for non-nutrition specialist World Bank staff to support their clients' efforts to enhance the nutritional impact of World Bank country investments. This document and the related Practitioner's Compendium offer practical advice to design and implement nutrition interventions in future operations based on a review of past successful and less successful attempts. The review is organized by type of financial incentive mechanism, which corresponds to the specific levels where the mechanisms exert their influence, i.e., national, sub-national, facility, community, households, or individuals.

The operational guidance for utilizing financial incentive mechanisms to improve nutrition answers the following questions.

- What has been the World Bank's experience using financial and non-financial incentive mechanisms to achieve nutrition results?
- What types of financial and non-financial incentive mechanisms have proven successful, and what features have led to success?
- What are the challenges and limitations of using incentive mechanisms to achieve nutrition results?

⁵ See also *Improving Nutrition Through Multisectoral Approaches*. 2013. Washington, DC: The World Bank.

- What specific lessons would inform the potential greater use of these mechanisms for nutrition impact?

The document has two parts and annexes. Part I presents the main forms of malnutrition and their determinants, high impact evidence-based interventions to reduce malnutrition, and the cost benefit and effectiveness of the interventions.

Part II defines incentive mechanisms and presents the main financial incentive mechanisms the World Bank employs to structure its financing to support nutrition. The analysis of the mechanisms is based on a review of World Bank grey literature, e.g., project appraisal documents, aide memoires, implementation status reports, and implementation completion reports, as well as semi-structured interviews with a range of World Bank staff with direct experience designing or supporting the implementation of operations with a nutrition focus. A May 2016 workshop with practitioners provided additional specificity.

Annex 1 contains a summary analysis of peer-reviewed published evidence on financial incentive mechanisms to achieve nutritional impact. The review draws mainly from the literature on incentives in public health, which most closely resembles the challenge of incentivizing nutrition. Annex 2 contains a nutrition glossary, and Annex 3 contains references for additional nutrition resources.



PART I.

Investing in Nutrition: What, Why, and How?

What is malnutrition?

Malnutrition encompasses all categories of poor nutrition caused by insufficiency, deficiency and/or excess. Malnutrition includes undernutrition and over-nutrition, each with specific definitions and indicators.⁶ One or more types of malnutrition can coexist in one household and even in one single individual. The main forms of undernutrition are stunting or chronic malnutrition, wasting or acute malnutrition, underweight, low birth weight, low body mass index, and micronutrient deficiencies. Overweight and obesity is a condition characterized by excess body fat.

Why does malnutrition matter?

Malnutrition is a driver of poverty. Reducing malnutrition is essential to achieving the World Bank's goals of eliminating extreme poverty and enhancing shared prosperity. Malnutrition drives poverty in three main ways.⁷

1. **DIRECT LOSSES**—Malnutrition causes poor physical status resulting in enormous direct productivity losses.⁸
2. **INDIRECT LOSSES**—Indirect losses in productivity are caused by poor cognitive development due to malnutrition, which results in poor school performance and drop-outs.⁹
3. **INCREASE IN COSTS**—Malnourished children and adults are more likely to be chronically sick and have a higher risk of hospitalization and longer hospital stays. Their households become impoverished due to higher health costs.

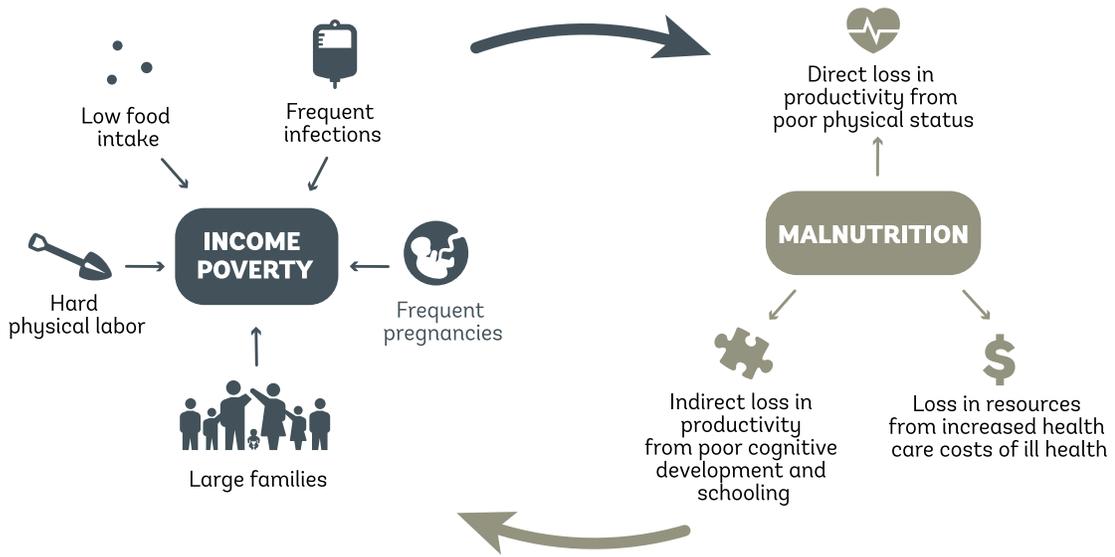
⁶ *Repositioning Nutrition as Central to Development: A Strategy for Large Scale Action*. 2006. Washington, DC: The World Bank.

⁷ *Ibid.*

⁸ J. Hoddinott et al. 2008. Effect of a nutrition intervention during early child. *The Lancet* 371: 411–16.

⁹ S. Grantham-McGregor et al. 2007. Developmental potential in the first 5 years for children in developing countries. *The Lancet* 369: 60–70.

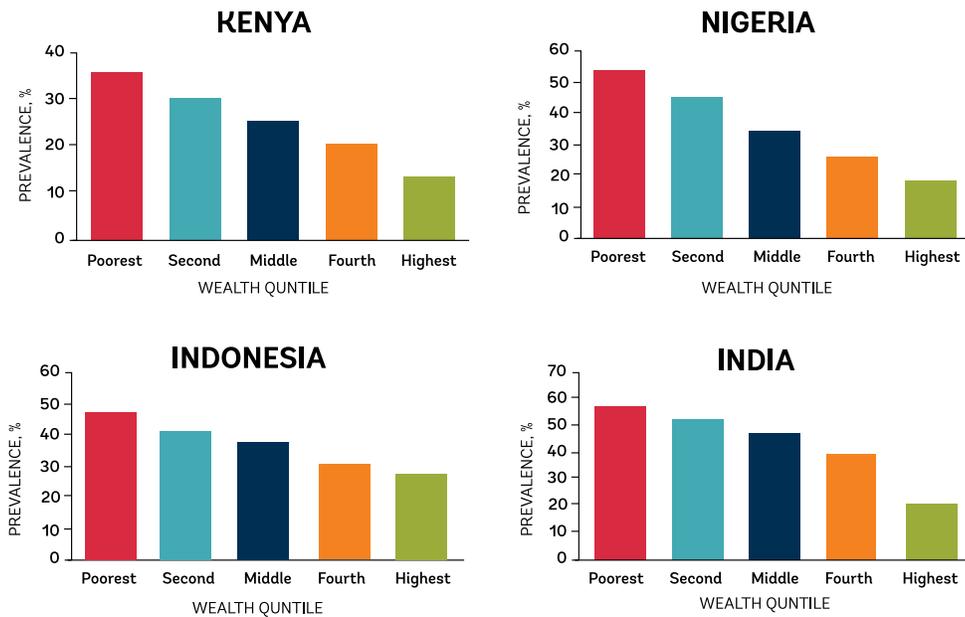
Figure 1. Cycle of Poverty and Malnutrition



Source: World Bank. *Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action*. 2006.

Malnutrition is a driver of disparities. While malnutrition levels in developing countries are often high even in the households from the highest income quintiles – highlighting the role of knowledge and behaviors – households from the lowest income quintiles often have rates of malnutrition that are twice as high as those from the highest income quintiles.¹⁰

Figure 2. Stunting Disproportionately Affects the Poor



Source: Data Source: Most recent nationally representative nutrition survey as reported in WHO, UNICEF, and World Bank 2015

¹⁰ C. Bredenkamp et al. 2014. Persistent inequalities in child undernutrition: Evidence from 80 countries, from 1990 to today. *International Journal of Epidemiology* 1-8.

How does malnutrition affect sectoral objectives?

Malnutrition is a barrier to achieving a range of sectoral development objectives.¹¹ The following sectors, among others, are directly affected by malnutrition.



HEALTH. Stunted and / or wasted children are at a much greater risk of dying than well-nourished children.¹² Malnutrition is estimated to be an underlying cause of 45 percent of child mortality. The health sector's objective of reducing child mortality is dependent on reducing malnutrition. In addition, reducing undernutrition in early life, the development of overweight/obesity and noncommunicable diseases in adulthood will slow escalating health care costs.



AGRICULTURE. Lost physical productivity due to malnutrition is a barrier to increasing agricultural productivity, particularly in agriculture systems heavily reliant on physical labor.



EDUCATION. Malnutrition is a barrier to generating high learning outcomes. Children may suffer up to a 25 IQ point loss due to malnutrition.¹³ They are unlikely to perform as well in school as their better nourished contemporaries, even if the conditions for learning in the education system exist, e.g., effective teachers, well-equipped schools, etc.



SOCIAL PROTECTION. Because well-nourished individuals have stronger physical immunity, they are more resilient and able to cope with shocks. They are also less likely to be poor, and those who are poor are better equipped to transform a cash transfer and accompanying measures into an opportunity to become more productive economically.



WATER AND SANITATION. Communities affected by undernutrition often have limited access to safe water and sanitation, reinforcing the causes of undernutrition and emphasizing the need for multifaceted solutions. Effective water and sanitation interventions include improved household toilets or latrines, improved water supply, safe household water management, including treatment and storage, and handwashing with soap. The safe handling, preparation and storage of food are also important.

Is nutrition a good investment?

Evidence-based nutrition interventions consistently appear as a high investment priority in economic analyses. Every dollar invested in proven nutrition interventions in developing countries yields approximately \$18 dollars in economic returns.¹⁴

In 2012, the 176 members of the World Health Assembly endorsed a Comprehensive Imple-

¹¹ *Improving Nutrition through Multisectoral Approaches*. 2013. Washington, DC: The World Bank.

¹² A.L. Rice et al. 2000. Malnutrition as an underlying cause of childhood deaths associated with infectious diseases in developing countries. *Bulletin of the World Health Organization* 78 (2000).

¹³ B. Lozoff, E. Jimenez, and J.B. Smith. 2006. Double Burden of Iron Deficiency in Infancy and Low Socio-economic Status: A Longitudinal Analysis of Cognitive Test Scores to 19 Years. *Archives of Pediatric and Adolescent Medicine* 160 (11): 1108–1113.

¹⁴ J. Hoddinott, H. Alderman, J.R. Behrman, L. Haddad, and S. Horton 2013. The economic rationale for investing in nutrition. *Maternal and Child Nutrition* 9 (Suppl. 2): 69–82. Median estimate for a sample of 17 high burden countries used by the authors.

mentation Plan on Maternal, Infant, and Young Child Nutrition.¹⁵ The plan included global targets focused on six areas: stunting, exclusive breastfeeding, wasting, anemia, low birth weight, and overweight. The targets aim to boost investment in cost-effective interventions. Some of the targets have been included by world leaders in the second Sustainable Development Goal, which is to end malnutrition in all forms by the year 2030.¹⁶ Despite the ambition of the targets, it is possible to achieve the World Health Assembly goals with the right actions, rapid scale up, and adequate financing. Building on previous analysis,¹⁷ the World Bank and partners have recently estimated that the world will need approximately \$50 billion to reach the stunting target and \$70 billion to realize the four key targets, including reducing stunting, over ten years.¹⁸ While this amount may seem daunting, it represents \$5–7 billion per year across official development assistance, domestic (public and households), and innovative financing sources across the globe. The incentives described in this report will contribute to accelerating the scale up of the effective actions.¹⁹

Table 1 demonstrates the results of detailed costing developed by the World Bank for nutrition interventions in four countries. The methodology focused on well-proven cost-effective interventions—a package of 10 nutrition-specific and some nutrition-sensitive interventions—for these particular contexts. Scaling up a set of ten critical nutrition-specific interventions is highly cost-effective when considered as a package. The analysis also modeled the cost-effectiveness of different scale up scenarios, offering insights into ways in which the impact of investing in nutrition interventions can be maximized under budget constraints. The methodology used to estimate the costs and benefits of nutrition investments is being replicated in other countries and is an important first step to drive political commitment and action, and to enhance the allocative efficiency of nutrition resources.²⁰

Table 1. Costs and Benefits of Investing in a Package of 10 Nutrition-Specific Interventions (US\$)

COUNTRY REGION (YEAR)	ANNUAL PUBLIC INVESTMENT REQUIRED	ANNUAL ESTIMATED BENEFITS			COST-EFFECTIVENESS ESTIMATES			
		DALYS Averted	Lives Saved	Cases of stunting averted	Cost per DALY averted	Cost per life saved	Cost per case of stunting averted	WTP threshold (GDP per capita)
DRC (2015)	371 M	2.6 M	77,000	1 M	143	4,929	226	454
Mali (2015)	64 M	509,302	14,000	260,000	178	6,276	344	715
Nigeria (2014)	837 M	6.3 M	180,000	3 M	141	4,865	292	3,010
Togo (2015)	13 M	115,295	3,000	60,000	127	4,635	238	636

Source: M. Shekar et al., 2016.

¹⁵ WHO. 2012. Report of the Sixty-Fifth World Health Assembly, 12.

¹⁶ See Sustainable Development Goal 2.2 targets. http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

¹⁷ S. Horton, M. Shekar, C. McDonald, A. Mahal, and J.K. Brooks. 2010. *Scaling Up Nutrition; What Will it Cost?* Washington, DC: The World Bank.

¹⁸ M. Shekar, J. Kakietek, J. Dayton-Eberwein, and D. Walters. Washington, DC: The World Bank Forthcoming 2016.

¹⁹ Ibid.

²⁰ M. Shekar, J. Dayton Eberwein, and J. Kakietek, 2016. The costs of stunting in South Asia and the benefits of public investments in nutrition. *Maternal and Child Nutrition* 12 (Suppl. 1): 186–195.

What are the causes and determinants of malnutrition?

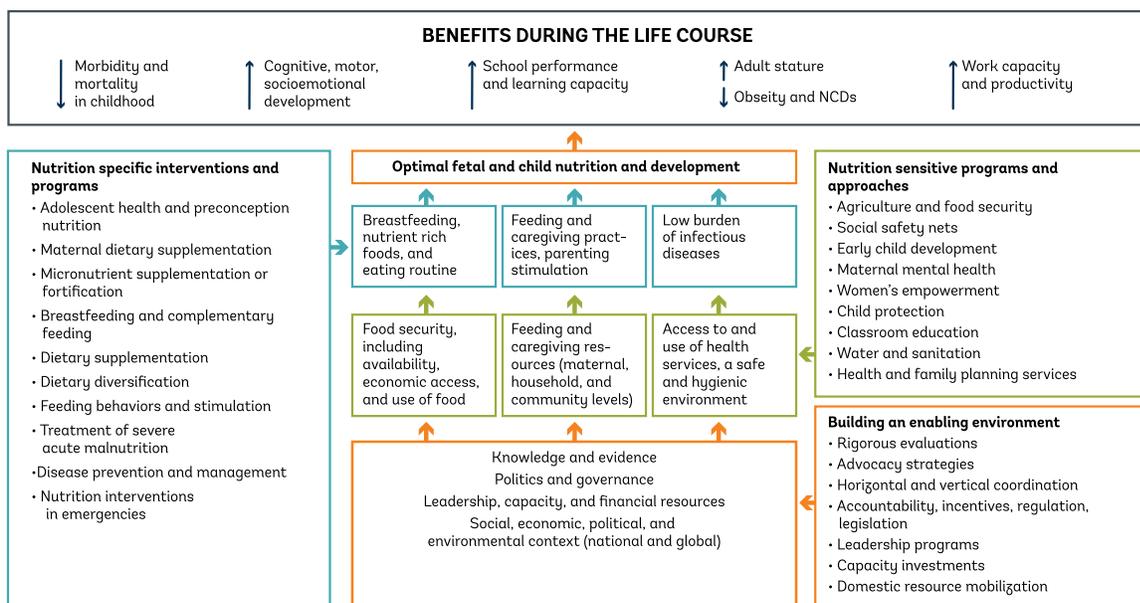
Good nutrition is the result of a combination of factors and dependent on multiple sectors.²¹ Good nutrition is essential for healthy development at various stages of the life cycle and *critical* for normal infant development during the first 1,000 days—from conception to a child’s second birthday. Malnutrition is due to immediate, underlying, and basic causes, which are briefly described.

IMMEDIATE CAUSES. Malnutrition is the result of a combination of immediate causes related to food and nutrient intake and health. To be well nourished, young children must have sufficient quantities of a balanced and nutritious diet at regular intervals; adequate feeding and caring practices, including parental stimulation; and a low burden of infectious diseases. Nutrition-specific interventions aim to improve the immediate causes of malnutrition.

UNDERLYING CAUSES. More distal underlying causes of malnutrition are embedded at the household and community levels. These include factors such as *food security*—which includes physical and economic access to food and nutrient diversity, and the *use of food*, including intra-household cultural norms related to food distribution, which often disadvantage women. Underlying causes related to feeding and caring resources include *intra-household distribution of tasks*, e.g., men’s participation in child care, *availability of time and financial resources* to ensure children are properly stimulated, etc. Equally important is access to *quality health services* to protect especially women and children against infection and to offer treatment when required. The role of a *hygienic environment*—including safe water and good sanitation—is a critical underlying cause of good nutrition. Behaviors and gender norms are important factors for each of these underlying causes. A range of nutrition-sensitive interventions address the underlying causes of malnutrition.

BASIC CAUSES. Institutional, political, and economic issues such as poverty reduction and economic growth, governance and stewardship capacities, environmental safeguards, and trade and patents issues, including the role of the private sector, are at the roots of the basic causes of malnutrition.

Figure 3. Interventions to Reduce Malnutrition



Source: *The Lancet Series*. 2013.

²¹ *The Lancet Series on Maternal and Child Nutrition*. 2013. <http://www.thelancet.com/series/maternal-and-child-nutrition>.

What nutrition-specific interventions work?

There exist well proven nutrition interventions and these should be scaled up.²² In 2008 and 2013, *The Lancet*, a leading medical journal, published two groundbreaking nutrition-focused issues reviewing the current evidence for effective interventions to reduce child and maternal malnutrition in developing countries. The analysis indicated that the total number of deaths in children younger than five years could be reduced by 15 percent if the affected populations had access to ten evidence-based nutrition interventions delivered at 90 percent coverage to the target population. Also, access to and uptake of iodized salt could alleviate iodine deficiency and improve health outcomes. Implementing the interventions at scale would avert about a fifth of the existing burden of stunting. The list of recommended high-impact interventions is included in Table 2. They are all nutrition-specific interventions focused on the proximate causes of malnutrition.

Table 2. High-Impact Nutrition-Specific Interventions

NUTRITION INTERVENTION	WHAT DOES IT INVOLVE?	WHY DOES IT MATTER?
PROMOTION OF BREASTFEEDING	<ul style="list-style-type: none"> Community-based education and behavior change 	Early breastfeeding reduces all-cause and infection related neonatal mortality by 44–45%
COMPLEMENTARY FEEDING	<ul style="list-style-type: none"> Community-based education and behavior change Provision of complementary foods 	Complementary feeding results in increased height and weight
MANAGEMENT OF SEVERE ACUTE MALNUTRITION	<ul style="list-style-type: none"> Community-based therapeutic feeding using ready-to-use-foods 	Provision of ready-to-use-foods leads to faster weight gain, improved recovery, and reduced mortality
VITAMIN A SUPPLEMENTATION	<ul style="list-style-type: none"> Provision of supplements Delivery through existing healthcare platform e.g., child health days 	Vitamin A supplementation reduces all-cause and diarrhea related mortality
SALT IODIZATION	<ul style="list-style-type: none"> Iodization of salt at point of processing Targeted to pregnant women 	Salt iodization increases birth weight and leads to 10–20% higher developmental scores
HANDWASHING WITH SOAP	<ul style="list-style-type: none"> Community education and behavior change Communications e.g., mass media 	Handwashing with soap reduces the risk of diarrhea
THERAPEUTIC ZINC FOR DIARRHEA	<ul style="list-style-type: none"> Access to zinc supplements for children Delivery through existing antenatal care platforms 	Zinc treatment for diarrhea leads to a 46% reduction in all-cause mortality
IRON AND FOLIC ACID	<ul style="list-style-type: none"> Provision of supplement to pregnant women Delivery through existing antenatal care platforms 	Iron and folic acid supplementation for pregnant women leads to higher birth weight
MULTIPLE MICRONUTRIENT POWDERS	<ul style="list-style-type: none"> Provision of micronutrient powders to children Demand generation including strategic communication 	Significant reductions in anemia
DEWORMING	<ul style="list-style-type: none"> Delivery of deworming drugs School-based or through healthcare system 	Treating children infected with worms increases weight
IRON FORTIFICATION OF STAPLES	<ul style="list-style-type: none"> Product fortification at point of processing e.g., flours 	Iron fortification results in 41% reduction in the risks of anemia

Source: Children's Investment Fund Foundation.

²² Ibid.

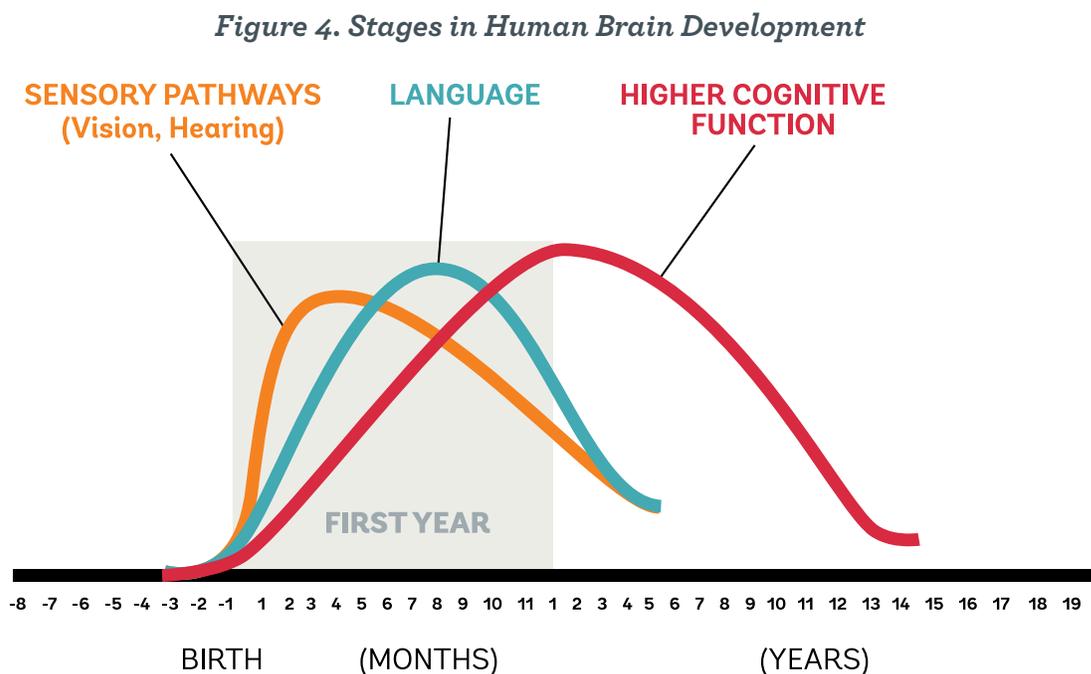
What nutrition-sensitive interventions work?

The Lancet nutrition series also reviewed evidence concerning the nutritional effects of nutrition-sensitive programs in four sectors: agriculture, social safety nets, early child development, and schooling.²³ While the need for nutrition investments in agriculture is clear, the available evidence of the nutritional effect on agricultural programs is inconclusive—except for increased intake of vitamin A from the biofortification of orange sweet potatoes.

The same review also reported that individual safety net studies show some effects from nutrition interventions on younger children exposed to the interventions for longer durations, but the nutritional effects have been weak. This probably has been due to inadequate nutrition goals, insufficient actions, and poor service quality. However, combined early child development and nutrition interventions show promising effects on child development, and in some cases, on improved nutrition, although not yet tested at scale. Parental schooling is strongly associated with better child nutrition. The effectiveness of emerging school nutrition education programs needs to be tested, however. *The Lancet* review noted that even though many of the programs reviewed were not originally designed to improve nutrition, they nevertheless have great potential to do so.

When in the life cycle is nutrition critical?

A relatively small “window of opportunity” exists during which most of the damage from malnutrition occurs—*damage that is mostly irreversible and detrimental throughout a person’s life*.²⁴ This golden window is referred to as the first thousand days—from conception to the end of the first two years of a child’s life.



Source: C. Nelson, in *From Neurons to Neighborhoods*, 2000.

²³ Ibid.

²⁴ National Research Council and Institute of Medicine. 2000. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Committee on Integrating the Science of Early Childhood Development. Jack P. Shonkoff and Deborah A. Phillips, eds. Board on Children, Youth and Families, Commission on Behavioral and Social Sciences and Education. Washington, DC: National Academy of Press.

To prevent irreversible developmental damage, good nutrition is critical for prospective mothers well before pregnancy and conception. Interventions targeting adolescent girls and their families, including male members, are particularly important to encourage delaying early marriages and pregnancies, which result in the fetus and the young growing woman competing for available nutrients. Also required are knowledge and services to prepare them physiologically for an eventual pregnancy, i.e., adequate weight, good micronutrient status.

How has nutrition evolved as a global development priority?

Nutrition is increasingly considered a foundation for sustainable and inclusive development. The evidence base regarding what works is robust. Table 3 outlines how key international actors have gradually galvanized around the challenge. The Scaling Up Nutrition movement has been instrumental in coalescing a wide range of partners from key sectors globally—but also in the more than fifty SUN countries—around clear nutrition objectives supported by financing, processes, and tools to support a scaled up nutrition response. Countries are mobilizing domestic financing and international donors and other development partners are renewing their commitment to the issue.²⁵

Table 3. Key Developments in the Global Fight against Malnutrition

DATE	EVENT
2000	Launch of the Millennium Development Goals
2006	World Bank publishes <i>Repositioning Nutrition as Central to Development</i>
2008	<i>The Lancet</i> launches first series on Maternal and Child Undernutrition
2010	The World Bank in partnership with the Bill and Melinda Gates Foundation, USAID, and the governments of Japan and Canada launch the Scaling up Nutrition (SUN) movement ²⁶
2012	World Health Assembly endorses the Comprehensive Implementation Plan on Maternal, Infant, and Young Child Nutrition
2013	Nutrition For Growth pledging conference and raise US\$ 4 billion in commitments for nutrition-specific interventions
2013	<i>The Lancet</i> launches the second series on Maternal and Child Nutrition (undernutrition and overweight)
2014	FAO / WHO Second International Conference on Nutrition Rome Declaration on Nutrition and Framework for Action
2015	UN summit on the post-2015 agenda adopts the Sustainable Development Goals SDG 2.2 focuses on nutrition (stunting, overweight, and anemia)
2016	UN launches Decade of Action on Nutrition
2016	African Development Bank launch African Leaders for Nutrition to sustain African political will and leadership on nutrition investment
April 2016	World Bank hosts high level event on Early Childhood Development / Stunting
October 2016	World Bank hosts Heads of State / Finance Ministers Summit on Investing in Young Lives

Source: Shekar et al., 2016.

²⁵ Shekar et al., 2016.

²⁶ World Bank. *Scaling Up Nutrition: A Framework for Action*, 2010.

The World Bank has been a major contributor in recent months to the high level dialogue on scaling up actions to prevent stunting, led by President Jim Yong Kim. Although the momentum in support of nutrition is building fast within the institution, great effort has been expended over time to generate greater awareness of the multisectoral importance of nutrition. In the early to mid-2000s, very few countries had nutrition on their development agendas, and nutrition was not a priority for most donors or the World Bank. In 2004–2005, the World Bank had very few staff working on the issue, very little analysis of what works, low institutional and senior management commitment, and minimal investments. The 2006 publication of the Bank report *Repositioning Nutrition as Central to Development* was a catalyst in reviving interest in nutrition within the institution, as well as amongst key development partners and governments. A rapid and significant scale up of staffing for nutrition within the World Bank followed in 2007–2008. The seminal *Lancet* Nutrition Series was published in 2008, followed by the World Bank’s 2010 publication of *Scaling Up Nutrition: What Will It Cost?*—the first such global nutrition costing.²⁷

The global movement, Scaling Up Nutrition (SUN), was launched at the World Bank in April 2010, with support from the Bill and Melinda Gates Foundation, USAID, and the Governments of Canada and Japan. In 2013, DfID and the Children’s Investment Fund Foundation (CIFF) organized the “Nutrition for Growth” event on the margins of the Olympic Games, which generated \$4 billion in donor pledges for nutrition. A follow-on media event is planned on the margins of the Rio Olympics in August 2016. The World Bank’s commitment to nutrition is growing fast—not just in the health sector—but across the key sectors of agriculture, social protection, education, water and sanitation. IDA and IBRD allocations to nutrition are increasing, supported by partners such as the Bill and Melinda Gates Foundation, the Power of Nutrition, and the Global Financing Facility for Every Woman Every Child.²⁸

²⁷ M. Shekar et al., 2016.

²⁸ Ibid.



PART II.

Financial and Non-Financial Incentives to Enhance Nutrition Results

This section is a review of the World Bank’s experience with various financial incentive mechanisms. They are used to enhance nutrition results by motivating change in behaviors at the national, sub-national, community, facility, household, and individual levels. This section draws mainly from experience in World Bank-financed operations and includes World Bank-specific incentive instruments and other instruments used more broadly by governments and development partners. The section also contains a discussion of some of the non-financial incentives that complement financial incentives at all levels of the system.

This review documents past operational experience that used incentive mechanisms to encourage nutrition programming and abstracts the potential strengths and challenges for each mechanism. This report and the accompanying Practitioner’s Compendium will aid task teams and their leaders to use the appropriate incentive mechanisms more effectively in future operations to achieve better nutrition outcomes. The information is primarily derived from experiential evidence from key informant interviews and a literature review, which is included in Annex 1.

What are incentive mechanisms?

In its simple form, an incentive is something that motivates an action. Incentive structures are a central feature of economics and are described as the interaction between a *principal*, who applies the incentive, and an *agent*, who receives the incentive. The basic tenet is that greater incentives lead to greater effort and better performance.”²⁹ Incentives can be classified into four categories:

- **Financial incentives:** when an agent can expect some form of material reward, e.g., money, in exchange for a particular behavior.³⁰
- **Moral incentives:** when a choice is widely regarded as the “right thing to do,” or particularly respectable, or conversely, when the failure to act in a certain way is unacceptable. An individual acting on a moral incentive obtains in return a sense of self-esteem, approval or even admiration from his community, or guilt, condemnation or ostracism if s/he acts against a moral incentive.³¹

²⁹ U. Gneezy, S. Meier, and P. Rey-Biel. 2011. When and Why Incentives (Don’t) Work to Modify Behavior. *J Econ Perspect* 25 (4): 191.

³⁰ K. Dalkir. 2013. *Knowledge management in theory and practice*. New York: Routledge.

³¹ Ibid.

- **Coercive incentives:** when failure to act a particular way results in physical force being used against the agent by others in the community.³²
- **Natural of intrinsic incentives:** this is a category of incentives that are driven from the personality of the agent, such as curiosity, fear, the pursuit of truth, wanting to contribute to society, etc.³³

Financial incentives can have two kinds of effects: a direct price effect, which make the incentivized behavior more attractive, and an indirect psychological effect. The psychological effect can reinforce the price effect but can sometimes also work in opposition to the price effect crowding out the incentivized behavior.³⁴

Financial incentives can have two kinds of effects: a direct price effect, which make the incentivized behavior more attractive, and an indirect psychological effect.

The *World Development Report 2015* argues that much of economic policy relies on a model of human behavior that takes little account of human sociality. Yet the fact that humans think socially “has enormous implications for decision making and behavior, and thus for development.”³⁵ This report outlines the following four implications of human sociality on development interventions.

First, economic incentives are not necessarily the best or the only way to motivate individuals. The drive for status and social recognition means that in many situations, social incentives can be used alongside, or even instead of economic incentives, to elicit desired behaviors. Moreover, economic incentives can both “crowd out” intrinsic motivations and “crowd in” social preferences. The role for incentives in policy is more complicated than is generally recognized.

Second, humans act as members of groups. Interventions that increase interactions or create groups among individuals who have a common interest in goals, such as breastfeeding, may facilitate the achievement of these objectives.

Third, there is a widespread willingness of individuals to cooperate in the pursuit of shared goals. Most people prefer to cooperate as long as others are cooperating. This implies that making behavior more visible and “marketing” adherence to norms, such as having men play an important role in child feeding practices, may be a cost-effective means of increasing contributions to collective goods.

Finally, human societies develop social norms as a means of coordinating and regulating behavior. Societies can get stuck in collective patterns of behavior that do not serve their interest. Since social norms are often taken for granted, socially appropriate behaviors by individuals can lead to suboptimal social outcomes. Norm change may sometimes be a necessary component of social change.³⁶

Incentives vary across cultures and over time because social incentive structures are established by different forms of social interactions that take place within cultural norms and expectations that vary geographically and over time. What is valued or is deemed unacceptable in one culture may not be perceived the same way in other cultures or within the same culture over time. We tend to perceive the world around us through mental models that reflect the shared understandings of our community.³⁷ For example, volunteerism by community health workers to

³² Ibid.

³³ D.C. McClelland. 1987. *Human Motivation*. Cambridge University Press Archive.

³⁴ Gneezy et al., 2011. 192.

³⁵ World Bank. 2015. *World Development Report 2015. Mind, Society, and Behavior*. Washington, DC. 54.

³⁶ Ibid. 55.

³⁷ Ibid. 62.

improve nutrition may be valued, and thus boost the worker's self-esteem in a country that recognizes that nutrition is a national development priority. In another setting, where volunteerism is not as valued, or where wealth accumulation confers social status, and where malnutrition is not considered a social priority, financial incentives may be more effective or even necessary. Even for an individual, such as a community health worker, the relative importance of a certain type of incentive may change over the course of a lifetime, e.g., starting with the self-esteem related to the prestige of having been selected, supplemented by intrinsic motivation and, over time, a potential gradual movement towards greater attention to financial incentives.

In this report and the Practitioner's Compendium, we focus primarily on financial incentive mechanisms, but we recommend that due attention also be given to non-financial incentives, i.e., moral, coercive, and natural / intrinsic incentives. Depending on the core constraints that are defined in the theory of change analysis,³⁸ a mix of financial and non-financial incentives will need to be used to achieve results. Part II of this report includes a discussion of some of the non-financial incentives that may be considered to scale up nutrition programs. That section is not meant to be a comprehensive review. Rather, it serves to remind the reader that a balance between financial and non-financial incentives is required. We recommend consulting the *World Development Report 2015*, which contains a rich discussion on this topic.³⁹

Because a range of incentives act on an individual concurrently, and because human behavior is complex, it is very difficult to predict the effect that a specific incentive will have over the short, medium, and long terms. This risk highlights the importance of establishing strong monitoring systems to track the results to be achieved, as well as the potential unintended consequences of certain incentives, e.g., their effect on the motivation and self-esteem of workers.

What has been the World Bank's experience using financial incentive mechanisms for nutrition?

Despite the World Bank's longstanding and wide geographic experience using the financial incentive mechanisms reviewed in this report, the Bank's experience using these mechanisms for the specific objective of achieving nutritional impact has been limited. A rapid review of the Health Results Innovations Trust Fund portfolio—which was instrumental in introducing performance-based financing in several World Bank health sector operations—revealed that only eight projects included nutrition indicators. The indicators almost exclusively focused on only two nutrition interventions: the treatment of severe acute malnutrition and growth monitoring. This probably reflects the low priority that was accorded to nutrition in the early to mid-2000s, but also demonstrates the need for the World Bank to become more creative in using financial incentive mechanisms to scale up its operations to meet the global stunting targets. For each mechanism, there have been a few cases—and for cash transfers, more than a few cases—of using mechanisms to achieve nutrition results, which have generated rich lessons for this report. However, the relatively thin experience does indicate the need to continue measuring and documenting lessons from implementation.

The Bank's experience using these mechanisms for the specific objective of achieving nutritional impact has been limited.

³⁸ See C. Valters. *Theories of Change; Time for a Radical Approach to Learning in Development*. London, UK: Overseas Development Institute, 2015.

³⁹ World Bank, 2015.

What is the evidence on the use of financial incentive mechanisms for nutrition?

We conducted a literature review to assess the impact of eight mechanisms, all of which the World Bank has incorporated into projects and initiatives to incentivize results for various nutrition-related outcomes. The mechanisms include: development policy lending (DPL), program-for-results (PforR), performance based budgeting (PBB), performance based financing (PBF), performance based contracting (PBC), conditional cash transfers (CCT), unconditional cash transfers (UCT), and public works programs (PWP). In the review, we considered evidence from experimental and quasi-experimental studies. Refer to Annex 1 and the full review for more information about the methods and results.

There is evidence that the financial incentive mechanisms reviewed can positively influence nutrition and related outcomes among children.

There is evidence that the financial incentive mechanisms reviewed can positively influence nutrition and related outcomes among children. However, most of the evidence has focused on health outcomes and health care utilization. Far less attention has been paid to nutrition, with the notable exception of cash transfers. Scant evidence exists about the impact of incentive mechanisms on nutrition-related health behavior, such as breastfeeding and complementary feeding practices. No studies were identified that evaluated the impact of development policy loans, program-for-results or public works programs on any of the nutrition-related outcomes of interest.

In many of the studies reviewed, there was variation in the effects of treatment between subgroups, e.g., rural versus urban children, and children in different age groups, etc. Also, the results were not statistically significant for all nutrition outcomes or for all types of health care services.

The design and implementation of the mechanisms often differs markedly across countries, which might explain some of the variations in study findings. The duration of follow-up also differed across studies. Therefore, it is difficult to draw general conclusions on the mechanisms' impact.

Not surprisingly, three of the four incentive mechanisms for which little or no evidence was found, i.e., DPLs, PforR financing, and PBB, are mechanisms that aim to shape international, national, or sub-national priorities. It is difficult to evaluate such types of mechanisms using randomized controlled trials or other rigorous study designs.

Important questions remain about each of the financial incentive mechanisms. The sustainability and cost-effectiveness of these mechanisms is uncertain, particularly when it comes to scaling up nutrition programs. It is also difficult to disentangle the effects of individual mechanisms when

multiple mechanisms are present in a country. Additional research is needed to shed light on the relative importance of supply-side and demand-side measures, although that is likely to be context specific.

Finally, most of the studies reviewed have been unable to pinpoint the pathways by which the incentive mechanisms improve nutrition. In CCT programs, for instance, the dissemination of health, nutrition, and hygiene information to mothers and pregnant women—which is a component of most transfer programs—is probably a key factor driving improvement in child nutrition. Children are also required to take nutritional supplements as part of some CCT programs. Moreover, the conditions attached to the cash transfers, as well as the size of the transfers, usually differ across programs. Most studies have not been able to determine which of these factors are most important in explaining any observed impact. In short, more research is needed to determine the usefulness of these mechanisms to improve nutrition in low- and middle-income countries.

How to select nutrition incentive mechanisms?

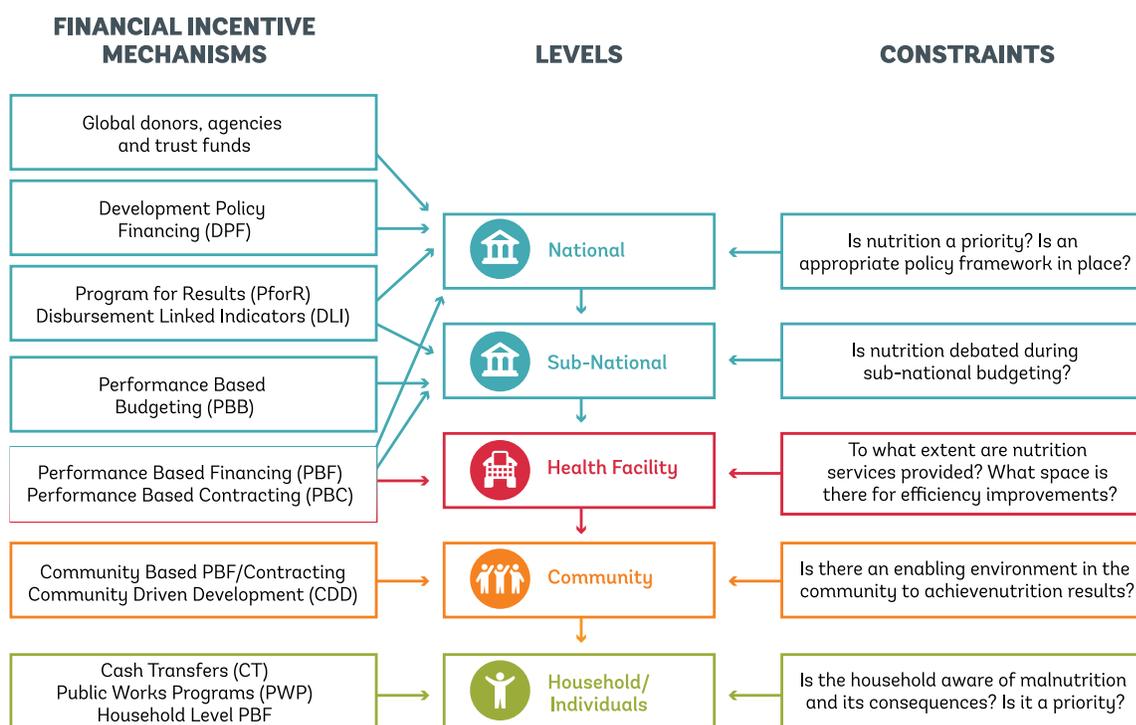
Nutrition programs and interventions should be implemented at different levels of the system. When planning a country’s nutrition program, first identify the key nutrition challenges and the different system levels affected to determine where to focus the effort and what approach or instrument might be most useful. To target the incentive mechanism to the right behaviors, a clear theory of change needs to be formulated and borne in mind. The results chain should include actions / behaviors at various levels, so that appropriate behaviors are incentivized at the relevant levels. The theory of change would take account of policies and programs at the government levels, supply-side readiness at the service delivery levels, the social mobilization and empowerment at the community level, and the eating / feeding / caring behaviors at the household and individual levels. The ability to verify the achievement of targets—and to counter verify independently as necessary—is often a critical factor in selecting financial incentive indicators.

The basic framework for the causation of malnutrition is the starting point for the theory of change. Three broad sets of determinants are often cited as resulting in good or bad nutrition. They are *household food security, access to quality health care services, and behavioral factors*—generally referred to as the triad of food, health, and care. Therefore, the policies, programs, services, and behaviors that affect any of these three sets of determinants need to be clearly identified, and the incentive instruments need to be applied at the appropriate levels where the instruments are expected to be effective.

At each level, it is useful to analyze how financial and non-financial incentives are aligned (or not) to either encourage or block actions.

The World Bank’s main instruments and approaches, and the levels at which they are typically used to improve nutrition, are depicted in Figure 5. Because the instruments and approaches are results-based and have associated financing, they are effectively financial incentive mechanisms.

Figure 5. Financial Incentive Mechanisms Applied at Different Levels



Source: Authors.

Which incentives should be used at what levels?



NATIONAL LEVEL

Nutrition must be considered a national policy and an investment priority. Incentives need to be shifted to key ministries so they invest budgetary resources and the extra time and effort necessary to collaborate inter-sectorally. Each ministry will need to adjust its work program to become more nutrition-sensitive. Strong leadership will also create the enabling conditions required for the private sector to play its role in financing nutrition.

In countries where nutrition is not sufficiently prioritized, international financial incentives such as investments from multilateral, bilateral, and nongovernmental institutions, as well as from innovative financing mechanisms—such as the Power of Nutrition trust fund and the Global Financing Facility for Every Woman, Every Child trust fund—can serve as effective financial incentives to raise the profile of malnutrition as a development challenge and to encourage the mobilization of domestic public and private financing.

In countries without a nutrition policy or with a policy that needs updating, a set of policy actions with specific triggers could be identified that act at the national level. The actions could form the basis for a *Development Policy Financing* (DPF) or a *Program for Results* (PforR)/ *Disbursement Linked Indicator* (DLI) operation. It is unlikely that a DPF would be developed specifically for nutrition. Nonetheless, nutrition policy actions could be included in broader DPF operations. Even though most PforR / DLI operations may not focus entirely on nutrition, nutrition results could be part of an agriculture or health sector PforR, for example. Entirely nutrition operations do exist, however. *Performance Based Financing* (PBF) can also be used at the national level to incentivize better performance by key governmental bodies that have been identified as constraints in the theory of change analysis, e.g., food safety and fortification regulatory bodies.



SUB-NATIONAL LEVEL

In countries with a federal system, it is important to consider how incentive mechanisms could sharpen the focus on nutrition results during the intergovernmental resource allocation process, including equalization measures. Nutrition programs need to be well financed within national to sub-national transfer schemes, and incentives need to be created to achieve nutrition results. Nutritional status data could also be considered as one dimension, affecting the relative size of transfers to the sub-national level. For example, provinces with higher stunting rates would receive an additional budgetary allocation to reduce stunting.

Performance Based Budgeting (PBB) is a financial instrument used in this case to incentivize at the nexus between the national and the sub-national levels. Nutrition policy measures, triggers, and targets need to be defined and financed according to their achievement. The approach can also be used to create competition between sub-national units. Sub-national units which achieve the greatest nutrition results or achieve their targets the fastest can be rewarded with higher levels of transfers. PforR / DLI operations can also include indicators that incentivize the achievement of nutrition results through national to sub-national financial flows. PBF can also be used at the sub-national level to incentivize the achievement of nutrition results, e.g., performance contracts with Provincial Health Directorates should include nutrition-related performance indicators.



FACILITY LEVEL

Several nutrition-specific interventions are provided to individuals through service delivery systems. Interventions mainly have been delivered through the health system, e.g., health clinics, and hospitals. But some interventions could also be delivered through schools, agriculture ex-

tension services, community-driven development platforms, etc. At the service delivery level, workers must have the ability and motivation to include nutrition services in the basic package of services offered.

Performance Based Financing (PBF) is a mechanism that acts on the incentive structure mainly at the service delivery level, although it is increasingly used at other levels such as national and sub-national levels within the health system. PBF could play a role in realigning incentives to ensure that workers are motivated and well equipped to deliver nutrition interventions. PBF could also be used to ensure that the medicine supply chain is incentivized to guarantee that the nutrition products are available to health facilities at the right times and in the correct qualities, e.g., zinc tablets, iron tablets, vitamin A capsules, and supplementary food for treatment of severe acute malnutrition.

Most importantly, because of its strategic purchasing through relative pricing, PBF can powerfully signal which services should be prioritized. PBF pricing can also be designed to target specific groups, e.g., the poorest households. It may also be a tool to target households with the highest stunting. Through the quality checklist and the related supervision (a non-financial incentive), PBF can also be a powerful approach to improving the quality of nutritional services provided, e.g., improving maternal counselling related to iron supplementation during pregnancy to improve compliance. The involvement of community-based organizations in the counter-verification of results—to complement verification by government entities—offers the potential to increase community awareness of nutrition and social accountability of service delivery.

Performance Based Contracting (PBC) links payments to performance, as measured by predetermined output indicators. Although all contracts are expected to have a performance clause—and could be terminated in the case of non-performance—PBC links payment to performance more explicitly and based on the delivery of specific services or outputs. PBC has tended to be used to contract health services to non-state entities mainly in fragile states and tends to have less stringent verification mechanisms than PBF.



COMMUNITY LEVEL

Almost all nutrition interventions require some level of behavior change by household members or by service delivery workers. Incentives must first be in place to enable communities to recognize the problem of malnutrition and its implications for their future and then prioritize actions to reduce the problem. Given its widespread manifestation and relative invisibility, child malnutrition often goes unnoticed in communities, i.e., it is “normal” for a high proportion of children to be stunted. *Community Driven Development* (CDD) and *Community-Based Performance Based Financing* (PBF) could be useful approaches to reducing malnutrition in communities.

Community-driven development provides grants to communities to develop projects to address problems prioritized by the community. The community grants are generally not results-based, that is the financing is provided to communities on the basis of a plan, not on the basis of the results achieved. Nevertheless, the fact that funds are provided to a community constitutes a financial incentive. Because child malnutrition is often difficult to perceive by individuals, how can its importance be raised to a high community priority? Education and sensitization about malnutrition’s consequences can help CDD programs become effective tools for communities to prioritize nutrition.

Community-based PBF is a more recent approach and an extension of facility-based PBF. It can be used to provide financial incentives to communities to achieve specific results, including

*Almost all
nutrition
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require some
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household
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service delivery
workers.*

a range of nutrition results that are best achieved at community level. However, verifying certain results remains a challenge.



HOUSEHOLD LEVEL

Key decisions affecting the nutritional status of mothers and children are made at the household level. In many developing countries, households provide a very important share of the nutrition financing. Households pay for such inputs as food, micronutrient supplements, preventive and curative health care, schooling, etc. Intra-household gender dynamics—particularly the woman’s extent of control over the usage of household resources—often determines the nutrition-sensitivity of the intra-household resource allocations. Women’s time and energy expenditure have an important impact on maternal and child malnutrition and are critical for improved

nutrition. Some nutrition-related health services can be provided at the household level.

Cash Transfers (CT) are powerful tools for nutrition improvement, whether they have co-responsibilities or not. They provide additional resources to poor households to procure essential nutrition inputs. The information that often accompanies the cash transfer can be a powerful non-financial incentive to enable the household members to make informed decisions on the use of their household resources. *Conditional Cash Transfers* (CCT) serve as a financial incentive to boost household demand for key services, many of which are essential inputs for improved nutrition, e.g., antenatal visits, child immunization, and school attendance by girls.

Household Level Performance Based Financing (PBF) is a relatively new approach that could yield benefits for nutrition. This form of PBF usually involves incentivizing health workers to conduct household visits. Based on a rapid assessment, the household and the worker agree on a household “action plan,” which is tracked through subsequent household visits, and its results are incentivized financially. Both the health worker and the household could be incentivized through the result-based action plans. If nutrition improvement is an objective of these visits and the assessment, this form of PBF could become a powerful tool for increasing the role of households in their own nutritional improvement.

Public Works Programs, because they offer low wages, are good at attracting the poorest of the poor. They also provide great opportunities for inter-sectoral action as the benefits go beyond health or nutrition and could yield broader developmental impact. They enhance the sense of pride and self-respect among beneficiaries since they are paid in return for work performed. They provide a lot of flexibility to the households in terms of how the compensation is utilized.

The newer generation of public works programs is experimenting with non-traditional employment which can contribute to nutrition, such as child care, community kitchens, and school feeding. In Djibouti, for example, public works have partnered with the health system to identify malnourished children in the families of the beneficiary workers, providing nutrition services if they exist. Public works agencies are accustomed to infrastructure work. It is a mindset change to have them work on social sector activities. When combined with appropriate educational programs, the additional income could be put to good use and enhance food security, and household nutrition status.

Key decisions affecting the nutritional status of mothers and children are made at the household level.

Financial Incentive Mechanisms: Strengths and Challenges

The incentive mechanisms are categorized by the levels at which they operate, i.e., government: national and sub-national, health facility, community, household, and individual levels (see Figure 5). For each level, we document the following: (1) a description of the mechanism; (2) the mechanism's potential strengths; (3) the potential challenges; and (4) examples of countries that have tried the instruments.



GOVERNMENT LEVEL: NATIONAL AND SUB-NATIONAL

⇒ *Development Policy Financing (DPF)*

Definition

- DPF combines the objective of reducing a government's fiscal deficit with sectoral or macro-level developmental objectives by incentivising policy reforms. Disbursements are based on predetermined policy triggers which are linked to the government completing reform actions.
- IDA / IBRD funds flow into the government budget and the country systems are used. The amount of IDA / IBRD financing is not necessarily linked to the cost of the reform.
- DPFs cannot be used to impose reforms without sufficient country ownership and commitment—an important prerequisite for success.
- The World Bank does not prescribe activities or inputs to be financed from the IDA / IBRD funds, which may be spent on anything as long as the agreed reforms are achieved—except a short negative list as may be agreed between the World Bank and the government.

Potential Strengths

- **Can unblock policy constraints.** DPFs could be useful to nutrition programs if the policy environment is the binding constraint to achieving nutrition outcomes, e.g., agricultural policies, food subsidies, gender policies, etc., and if strong government commitment exists (or could be developed) for specific reform measures to remove the constraint. Agriculture policies are closely linked to nutrition, and so are social safety net programs. A national policy on ensuring universal health coverage could have a beneficial impact on nutrition, if nutrition services are included in the benefits package. Food safety legislation, regulation of baby formula foods, and food fortification with micronutrients are other relevant policy areas for nutrition. A DPF could facilitate moving such policies in the right direction.
- **May generate greater ownership and sustainability.** DPFs entail no micromanagement by the World Bank in terms of activities carried out or expenditures incurred. The country's own systems are used. Well-designed DPFs usually ensure that the incentivised reforms have strong national ownership and commitment. The benefits are therefore likely to be systemic and more sustainable. Sustainability is critical to nutrition, which is a long-term and continual objective.
- **Potential to raise the profile of nutrition.** Adding nutrition into a DPF could help raise the importance of nutrition, positioning it as a national development priority at the same level as other policy reforms included in the DPF.
- **Attractive to governments.** DPFs are quick disbursing and contribute to the country's fiscal health and sector-specific goals. A DPF is attractive to ministries of fi-

nance, which typically are the World Bank’s counterparts in negotiating the World Bank’s country assistance. Adding a nutrition-related policy trigger to a DPF could be a smart strategy in an otherwise less than enthusiastic environment for stand-alone nutrition operations.

Potential Challenges

- **Does not address implementation challenges.** DPFs are not the instrument of choice when the main constraint to improved nutrition is implementation, rather than the policy environment, which is often the case. In such contexts, an operational level incentive instrument may be warranted, rather than a policy reform measure.
- **Requires that malnutrition be recognised as a national priority.** In order for a government to decide to include nutrition in a DPF, the country’s malnutrition challenge and its economic implications will need to be understood by policy-makers (particularly in the central ministries such as finance and planning), which is often not the case.
- **Does not address socio-cultural or behavioral challenges.** In many countries, the core challenge to improving nutritional status may be socio-cultural or behavioral at the household or community level. A DPF alone would not be suitable instrument to address these constraints.
- **Reforms may be reversed.** Changes in the government or policymakers may result in the reversal of reforms if it was merely a high-level decision. The DPF must be designed carefully to ensure that the disbursement triggers fully institutionalize the reform and render a reversal difficult. Monitoring the trigger actions closely is an essential prerequisite for success.
- **No guarantee of increased allocations to nutrition.** There is no guarantee that IDA funds will be spent on nutrition services or programs since the World Bank does not

PERU P116264

RESULTS & ACCOUNTABILITY (REACT) PROGRAMMATIC DPL

Project development objective (PDO).

Nutrition-specific objectives are to (i) increase demand for nutrition services by strengthening the operational effectiveness of the Juntos Conditional Cash Transfer (CCT) program; and (ii) improve coverage and quality of the supply of basic preventive health and nutrition services in the communities covered under the Articulated Nutritional Program (PAN), including Juntos.

Results of interest. REACT DPL series supports policies that are expected to lead to (i) improved parental understanding of expected outcomes in education, health, and nutrition; (ii) improved outcomes in second grade literacy, especially in rural schools;

(iii) reduced maternal and neonatal mortality; and (iv) better nutrition outcomes. The government set a target of reducing undernutrition by 5 percent in five years.

Indicators. As a DPL, this operation does not have “indicators” in the conventional sense of the term. However, it included the following “prior actions” specific to nutrition: MINSA has changed SIS norms to include the CRED (child growth and development) protocol; Goals for CRED production are agreed between the health sector and the PBB system for each health executing unit; Ministry of Finance increased the 2010 budget for CRED by 330 percent, compared to the 2009 budget, and allocated the additional funds to regions

with a low level of CRED spending relative to their malnutrition levels.

Operational modality. Activities to support both objectives include a strong emphasis on promoting good governance to monitor the impact of the government programs such as Juntos. A manual and supporting communication materials were developed for Community Nutrition Promoters, and the expected height gain in the first two years of life was popularized. The operation is adapted to respond to the country’s results-based financing strategy and provides direct support to PAN. Evaluation: After 10 years, the results are remarkable—stunting decreased from 28 percent to 14 percent.

track its funds separately under a DPF. The funds are comingled in the government budget. Therefore, unless the policy reform pertains directly to providing more nutrition resources, the DPF alone may not achieve an increased allocation.

Examples of Country Experience

India, Mozambique, Palestine, Peru

➤ **Program for Results (PforR) and Investment Project Financing with Disbursement Linked Indicators (DLIs)**

Definition

- PforR is a relatively new lending instrument which links IDA / IBRD development financing to results and moves from the “project approach” towards a “program approach”, whereby the World Bank is financing a “slice” of a government program. Prior to the PforR, to financially incentivise certain results, teams used Disbursement Linked Indicators (DLIs) within Investment Lending—currently called Investment Project Financing (IPF). Although many operations still use DLIs under IPFs, as a proxy for PforR, both instruments essentially adopt the same incentivising principle that seeks to finance outputs rather than inputs. Therefore, we treat PforR and DLI operations together.
- Under PforR and DLI, disbursements from the World Bank to the country are based on achieving predetermined targets or results, rather than inputs purchased. Results could be outputs or outcomes, but are usually defined in terms of outputs—sometimes called intermediate outcomes. In practice, many DLI operations use process milestones as “results” or “proxy results.”
- The World Bank does not prescribe the activities and expenditures for a PforR or DLI operation. The funds go to the treasury and may finance a specific program, e.g., the budget of the Ministry of Health or the HIV/AIDS or the maternal and child (MCH) programs. As long as the results are achieved, the money can be spent on anything within the program. In the case of an IPF with DLIs, disbursements are made against a list of pre-agreed “eligible expenditures.”
- Disbursements are based on achieving specific targets which are usually confirmed through independent verification. Within that framework, some prorate the disbursement proportionately to how much of the target is met, while others disburse on an all-or-none basis, i.e., partial achievement or underachievement of targets merits zero disbursement. A delayed achievement of targets can result in delayed disbursement or disqualification of the amount linked to the delayed result.
- Although PforR and DLI operations tend to incentivize the national level, they can also be used directly at the sub-national level, e.g., in a province / state in a large country, or to incentivize national to sub-national transfers in a manner similar to performance-based budgeting.

Potential Strengths

- **May lead to greater ownership and sustainability.** PforR / DLI operations entail no micromanagement by the World Bank, like the DPF. In the case of the PforR, the country’s own systems are used. Therefore, the results are likely to be more systemic and sustainable.
- **Provides flexibility in implementation.** PforR / DLI operations place less focus on inputs and process. Although some level of attention is necessary at these stages

of the development cycle to understand any problems in case the results are not achieved. This approach empowers managers, and provides flexibility on ways to achieve the results. Nutrition programs could particularly benefit from such delegation of authority, since they often require innovation at the grassroots level.

- **Enhances accountability for achieving results.** With the strong focus on results, the responsibility for achieving them is placed squarely on the government. If results are not achieved, the government does not receive the funds. If results are delayed, disbursements are also delayed or cancelled. The PforR / DLI instrument directly incentivises performance and enhances accountability by shifting the focus from project administration processes (e.g., volume of procurement transactions) to results.
- **Can increase the visibility of nutrition programs.** The focus on results (and on the resources that get released when the results are achieved) can provide additional visibility to nutrition within the wide range of priorities faced by governments in program implementation.
- **Can incentivise healthy competition.** It is possible to design these operations to introduce competition between sub-units of government (e.g. provinces, states or districts) on the timing for the achievement of results, such that the first few sub-units to achieve a particular result would get an additional financial incentive.
- **Greater likelihood of achieving results.** If the operation is well designed, i.e., appropriate indicators with realistic targets are selected, a clear verification protocol is agreed upon, and the necessary monitoring systems are established, the likelihood of successfully achieving the agreed upon results is high.

INDIA P121731

ICDS SYSTEM STRENGTHENING NUTRITION IMPROVEMENT PROJECT (ISSNIP)

Project development objective (PDO).

To (i) strengthen the Integrated Child Development Services (ICDS) policy framework, systems and capacities, and facilitate community engagement, to ensure greater focus on children under three years of age; and (ii) strengthen convergent actions for improved nutrition outcomes.

Results of interest. Improved systems in terms of planning, recording, reporting and monitoring of information, improved delivery of services, capacity-building of the frontline workers to improve maternal, infant, and young child feeding behaviors among pregnant and lactating women and their children.

Indicators. PDO indicators include: Anganwadi Centers (AWCs) implementing the inter-personal communication (IPC) activities focused on infant and young

child feeding (IYCF) practices; and project states in which pilots of “convergent nutrition action” have been implemented and evaluated in at least one district. Thirteen DLI milestones were set; all of them are system improvement indicators, e.g., real-time ICT-based M&E system with standardized operating procedures and specifications for hardware; people trained in the system or on specific nutrition modules, outreach and community-based processes such as monthly events held. Service delivery outputs are monitored as non-DLI, e.g., pregnant and lactating women, children (with proportion of female children amongst these), and adolescents who have benefited from the services. No behavioral outcomes are being measured.

Operational modality. Of the 13 DLI, six are under the responsibility of the central government and seven are at

the state level. The center has \$7 million for its six DLIs. Additional incentive: Flexifund / Challenge Fund (\$5 million) for the first three states that meet each of the DLIs. The seven that belong at the state level, \$25,000 per DLI, could be used for CCT or PBF or such approaches. The first three states to achieve each DLI get an additional incentive amount. Under the restructured design, interventions are focused on behavior change for nutrition primarily by building worker capacities to counsel for behavior change, through better outreach, and to focus on children 0–3 years of age, e.g., improved breastfeeding / complementary feeding practices. Innovations include the introduction of a mobile app that allows Anganwadi workers to enter data, generates due lists, helps daily work-planning, sends SMS alerts, promotes better growth-monitoring, generates the growth chart, and has BCC videos.

Potential Challenges

- **Capacity of the government to deliver.** As the World Bank focuses more on outputs and outcomes and leaves it largely to the government to reach the results using its own processes and inputs, PforR / DLI operations adopt a hands-off approach, which assumes robust governance systems and the government's capacity to plan and implement its programs to achieve the agreed results. These assumptions may not always hold true, especially for ministries responsible for nutrition which are often weaker. It is sometimes necessary to design "hybrid" operations in which the focus is mainly on incentivising results but which also contain a more traditional input-driven form of technical assistance to enhance capacity to deliver.
- **Reluctance by governments to accept the risk of non-performance.** Governments often may be reluctant to accept the risk of incurring expenditures without guaranteed financing. Often their systems are not very flexible to manage that risk. Even though the first year's disbursement are made as an advance, the subsequent year's financing depends on concrete targets being met, which means that there is a real risk of funds not flowing. In nutrition programs involving regular service delivery or cash distribution, such stoppage of fund-flow could be seriously detrimental to the population.
- **Complex operations.** PforR/DLI instrument may not be suited for very complex operations with too many monitored results. The more indicators, the less their monetary value since the total envelope is fixed and numerous indicators would be more difficult to monitor.
- **Selecting the right indicators.** Certain service-oriented indicators are easier to measure, report, and pay against, e.g., vitamin A supplementation, and growth monitoring. Certain others, especially community level indicators, like exclusive breastfeeding are difficult to measure, forcing us to settle for knowledge indicators rather than actual behaviors. More creativity is needed.
- **Limiting the number of indicators.** Typically, health and nutrition operations have numerous results of interest. To make the operation manageable, the list of indicators must be kept short, usually less than 10. Some indicators of interest must be omitted from being linked to financing, which is feasible if a robust set of tracer indicators is sufficient for the absence of others. The omitted indicators can be included in the results framework and monitored without being linked to disbursement. This positioning, however, would affect the level of priority of those indicators.
- **Results must be achieved in a short timeframe.** The PforR / DLI approach cannot directly incentivise results that take longer than a year to manifest, e.g., behavior change or nutritional status improvements, because disbursements cannot wait for those results to be demonstrated. Therefore, establishing measurable intermediate results is critical and could serve as a good proxy for the ultimate outcome of interest. This challenge can be mitigated by "breaking down" results with longer gestation periods into specific intermediate results which can each be incentivised.
- **Potential to miss some important results.** Due to the necessary selectivity of indicators linked to financing, other important results could be neglected. This risk is particularly challenging for a complex area like nutrition, with a wide spectrum of results of interest.

Examples of Country Experience

Bangladesh, Ethiopia, India (national nutrition project as well as projects in the states of Uttar Pradesh, Karnataka and Andhra Pradesh), Indonesia, Laos, Morocco, Myanmar, Nepal, Niger, Nigeria, Sri Lanka, Tanzania

➤ Performance Based Budgeting (PBB)

Definition

- PBB is a mechanism by which a higher level of government allocates resources to a lower level of government, based on the latter's performance measured by agreed indicators and targets. For example, the Ministry of Finance might allocate the budget for the Ministry of Health based on the past year's performance. Or in a federal system, the central government might allocate the state, provincial or district budgets on the basis of past performance. PBB usually involves a MOU or similar arrangement between the financing entity and implementing entity.
- PBB is not the usual way of budgeting in most developing countries. Budgets are generally developed using historical data of allocations and expenditures and based on inputs rather than outputs. A reformist and forward looking government and leadership is critical for PBB to work.

Potential Strengths

- **Budgets reflect priorities and reforms.** If nutrition results are included in the performance measures that influence the budgetary allocation, sub-national priorities are likely to move in a direction favorable to nutrition programs.
- **Closer to service delivery and the needs of people.** PBB moves the incentives and risks to the sub-national levels, which are closer to the action. PBB empowers sub-national level managers and provides flexibility on ways to achieve the results. This devolved accountability and the related flexibility is important for nutrition given that the approaches may vary based on the specific determinants and the socio-economic composition of the populations.
- **Enhances accountability.** PBB is likely to be attractive to the ministries of finance (MOFs) because an enhanced level of accountability exists prior to budgetary allocation. PBB allows the MOF the flexibility to allocate resources to the ministries and departments that have demonstrated a record of producing better results. This may be particularly useful for nutrition programs, some of which have a legacy of poor performance, which has discouraged central ministries from further allocations.
- **Can incentivise healthy competition.** It is possible to design these operations to introduce competition between sub-units of government, e.g., provinces, states or districts.
- **Alignment with the policy framework.** PBB is suitable for achieving program results when the national policy environment is already conducive to program implementation at sub-national levels, and robust monitoring systems are available, along with the necessary information base. PBB can be used to incentivize shifts in delivery that are introduced in recent policy reforms.
- **May increase financial allocations to nutrition.** Nutrition could benefit from PBB because often, a constraint is the insufficient resource allocation—a problem at the operational level rather than the policy level.

Potential Challenges

- **Requires a change in mindset and strong leadership.** PBB entails an entirely new way of planning, budgeting, and financial management, as most governments use historical budgeting. Even though PBB has strong potential, it may be difficult to implement in some contexts since it involves a fundamental change in mindset and the way of doing business.

- ***Requires strong capacity for implementation.*** Implementation is not guaranteed and it may not affect behaviors at the service delivery or household levels, which are critical to nutrition results. On the other hand, if the incentive is sufficiently strong and there is sufficient autonomy, the receiving entities may be able to organize themselves to deliver, or a complementary technical assistance component could be designed into the World Bank operation to address specific implementation weaknesses.
- ***Requires devolution of authority.*** PBB requires a strong degree of authority to be devolved to the operational levels and the necessary capacity to be built, without which the incentives won't be empowering. PBB may not be suitable in countries where sub-national capacities or governance systems are weak or in which the necessary autonomy for delivery is not provided.
- ***PBB could increase inequities since it rewards better performers.*** Where sub-national capacities vary across states or districts, PBB could benefit the already better resourced states and districts, which may be the better performers. This could result in denying the low-performers the very resources that they need to build their capacities to perform better, thus perpetuating a vicious cycle of low resources → low capacity → low performance → further low resources. This scenario needs to be avoided by allocating a minimum level of resources based on need and by adding a bonus allocation for performance, rather than making the whole budget dependent on performance. Often the lowest performing provinces or districts are also where the highest proportions of malnourished people live. Another way to avoid this scenario is to allocate resources based on the rate of change, i.e., whereby sub-national units with the greatest improvements from the baseline would receive the largest allocations.
- ***Risk of focusing on only a subset of results of interest.*** PBB could skew program attention to selected results at the expense of other important ones, which is the case of PforR or any other incentivized financing system. This is a particular challenge for nutrition, which has a complex range of determinants requiring several results to be tracked.
- ***A disconnect may exist between budget and execution.*** If applied narrowly, this instrument's potential benefits could be limited to priority setting, since it may only impact the budget and not necessarily the execution. However, approaches could be designed that not only focus on allocations but also on execution of budgets.

Examples of Country Experience

Argentina, Peru



HEALTH FACILITY LEVEL

⇒ *Performance Based Financing (PBF)*

Definition

- While results-based financing (RBF) is used as a broad term encompassing several different types of incentivising results, performance based financing (PBF) usually refers to an approach that specifically pays financial incentives to the individual or institutional service providers. The payments are based on the quantity and quality of outputs delivered. The terms such as “fee for service” or “pay-for-performance” are sometimes used to describe this instrument.
- The additional funds from PBF can be used to improve the facility or services, and / or to pay “bonuses” to the personnel. How these funds are distributed at the health facility level and what proportion could be paid as bonuses or salary supplements varies widely. In some countries, these decisions are left to the health facility level managers. Whereas in other countries, strict guidelines are sent from the central level.
- PBF works best when the unit being contracted (e.g., the health facility) has a high degree of autonomy as to how it delivers services. In most countries, however, this autonomy is circumscribed by some rules such as public service rules on hiring and firing of staff.
- PBF involves a separation of functions between the regulator, purchaser, and service provider. It involves contracting an external agency which is responsible for the verification and payment of services. A specific package of services is defined and rates are applied for each service. Both public and private health facilities can be contracted for service delivery, depending on the regulatory framework in the country and the availability of these providers. Specific catchment areas are defined for each service provider.
- Prior to payment, the quantity of services is verified, usually through the internal inspection service of the Ministry of Health. On a less frequent basis (e.g., quarterly) community-based organisations undertake counter-verification of the results. This counter-verification serves as a “check and balance” against collusion between service providers and the inspection services.
- While PBF has been applied mainly at the health facility level to date, the basic tenets of the approach are being increasingly applied at the community level as well as at all levels within a health system. The latter enables an alignment of incentives to improve service delivery. For example, World Bank projects that use a PBF approach in health are increasingly establishing performance contracts not only at the health facility level, but also at the other administrative levels of the system (e.g., district, provincial) all the way to the regulator at the national level.
- Some PBF approaches also provide a higher payment to a health facility for having reached pre-identified members of the community (through community-based targeting) with free services. These could be the poorest members of the community or people with special needs, such as people living with disabilities. It is likely that this targeting is reaching households with a higher likelihood of malnutrition.
- Increasingly, a quality checklist (some have approximately 200 indicators) is being used to assess the quality of services provided, and adjustments in payments (either negative or positive incentives) are applied based on the quality checklist score.

Potential Strengths

- **Closer to the beneficiary.** PBF moves the program resources, incentives, accountability, and risks mainly to the health facility level, thus making it more likely to succeed—if the binding constraints are at that level. In addition, in countries where elite capture is a challenge, PBF helps circumvent elite capture at the central level because the bulk of the financial resources are directed to frontline health facilities through payments directly to their bank accounts.
- **Greater social accountability.** The counter-verification carried out by community organizations is a practical way to empower communities to have oversight over service delivery. When nutrition is part of the services being counter-verified, this enables communities to improve their understanding and sense of ownership of their malnutrition challenge.
- **Increased transparency.** The management information system for PBF (web portal) makes data available publicly about the performance of the health system. This could be a valuable source of “real-time” information on some aspects of nutrition services, which can be used to review health facility performance more regularly. Data on nutrition interventions in most countries is not collected often enough to provide regular monitoring and accountability.
- **Potential to increase the focus on nutrition.** By adding specific nutrition services to a PBF program, it is possible to enhance the focus and attention to those services, which could otherwise be neglected and subsumed under a broader package of maternal and child health services.
- **Increased monitoring and feedback.** While the verification of quality and quantity is primarily set up to confirm payments, the process also enables service providers to get regular feedback and to learn from their mistakes. This could be a useful means to increase capacity of service providers to deliver nutrition interventions, compen-

CAMEROON P104525

HEALTH SECTOR SUPPORT INVESTMENT PROJECT

Project development objective (PDO).

To increase utilization and improve the quality of health services with a particular focus on child and maternal health and communicable diseases.

Results of interest. Health (improved utilization and quality of health services), with maternal and under-five nutrition results added subsequently.

Indicators. The original PDO indicators were (i) children immunized for DPT3 (< 12 months); (ii) births attended by skilled professional; (iii) children under five sleeping under insecticide treated bednets the night before the survey; (iv) tuberculosis treatment success rate (percentage of those who are smear positive who are successfully treated);

and (v) patients reporting satisfaction with health services. The following nutrition-specific indicators were included: under-five children with severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) treated respectively at the hospital and the primary health center (PHC) level; referrals and counter-referral for nutrition (teased out from the total list of referrals). At the community level: patients of SAM and MAM referred by the community health workers (CHW) to the facility (and confirmed); household visits by a team (CHW + facility staff) according to protocol. At the hospital level, the number of inpatient days for SAM.

Operational modality. Improving district level health services through PBF at the

primary health center and hospital level. Also extended PBF to the community level. Approved in 2009, the operation took two years to get off the ground in earnest. Between 2011 and 2014, pilots were tested and in 2014, additional financing enabled nationwide scale up. Nutrition indicators were added to the existing PBF program in one region. The operation is now financing the nutrition outputs throughout the country, although the problem primarily affects the north and the east. UNICEF pays for the nutrition results for one region and IDA finances for the other regions.

Evaluation. The provision of services increased, but it is too early to evaluate nutrition outcomes.

sating somewhat for the often low level of nutrition training which the personnel of health facilities receive.

- **Sharper focus on the highest priority services.** The PBF package of services is a subset of the range of services offered by a facility. The services are chosen on the basis of their ability to address the highest burden of disease in the country. The sharper focus on the delivery of these interventions should increase the impact on the highest priority public health concerns.
- **Greater focus on quality.** PBF may improve the impact of some of the key nutrition-specific interventions that could have a significant impact, if they are delivered with high quality. For example, growth monitoring and promotion (GMP) has had limited impact to date because the focus tends to be on weighing children and the quality of the accompanying counseling when a child's growth is faltering is weak. Through the quality checklist, PBF may be able to correct this.
- **Tends to improve access to services.** An important aspect of PBF is the initial business planning that takes place with health facilities to enable them to restructure their work so as to maximize their efficiency in service delivery. This can lead to a reduction in fees, which in turn increases demand and often not only increases access but also improves overall revenue for the health facility.
- **May lead to efficiencies in the supply chain.** Increasingly, PBF is used to improve the alignment of the functioning of the pharmaceutical supply chain with the needs of the service providers and clients. These efficiencies would be of benefit to nutrition services (independent of whether the service is one of those purchased through PBF or not) because breaks in the supply chain are often a major barrier for the delivery of nutrition programs. For this benefit to accrue to nutrition, all essential nutrition supplies must be included in the list that is assessed as part of the PBF quality checklist for the pharmaceutical system.
- **Encourages greater autonomy.** PBF is expected to empower local level managers and provide flexibility in ways to achieve the results. The effectiveness of PBF depends largely on autonomy being genuinely granted to health facility level managers. This autonomy is important for nutrition because different approaches may be needed to deliver effective services (especially those which require behavior change) depending on the socio-cultural composition of the community.
- **May encourage benchmarking and learning.** PBF could instill an environment of healthy competition among health facilities, especially if financial incentives are complemented by non-financial ones. Increasingly, PBF programs are developing web portals that contain performance information about each participating unit. In addition to increasing transparency, the data enables positive deviance analysis and opportunities to learn from the better performers. Positive deviance is an approach that has worked well for nutrition, but mainly at a relatively limited scale so far. PBF data systems may enable a scaling up.

Potential Challenges

- **Focus primarily on the supply of services.** While PBF could contribute significantly to increasing the quality and quantity of some of the nutrition-specific interventions, it is insufficient by itself to address malnutrition. So far, PBF's main limitation for nutrition is that it primarily incentivizes service delivery, i.e., the supply side. Nutrition interventions also require strong action on the demand side—at the household and community levels.

- **Possible resistance.** PBF entails a new way of compensating providers and could face resistance from staff and bureaucratic hurdles. For example, current rules may not allow for payment of bonuses to health care providers. In most settings this challenge has proven to be manageable, but has required important investments in time upfront to explain the benefits of the new approach.
- **Potential cost increase.** PBF would increase the cost of service provision, since the performance pay is in addition to existing compensation and there are additional costs related to verification, etc. Generally such additional costs to the system are not significant and are considered well worth the results of improved quantity and quality of services. Nonetheless, these additional costs need to be assessed against the fiscal space for health and the overall cost-effectiveness of the interventions. In the case of some preventive nutrition services (and some curative services), which concern a large number of individuals in the catchment area (as opposed to disease curative services where only the sick come to facilities), the large numbers can result in cost escalations, which has been why some nutrition services have not been included in the PBF package in the past. This challenge may require further targeting of nutrition services.
- **Balancing nutrition with other interventions in the package of services.** Only a limited number of services can be included in a PBF system, which poses a challenge as to how many and which nutrition indicators to include. Until recently, the PBF package that was most often used had focused on two nutrition services: a growth monitoring session (without necessarily focusing on the availability or quality of accompanying counseling) and treatment of severe acute malnutrition. Given the poor performance of growth monitoring globally and the small proportion of children that suffer from severe acute malnutrition (SAM) (compared to stunting), these two services are likely to have only limited direct impact on stunting. However, other basic health services such as antenatal care, treatment of malaria, treatment of diarrhea and child immunization, all of which are typically included in a standard PBF package, will have an indirect positive impact on nutrition.
- **Verification of certain nutrition services is difficult.** One of the strengths of PBF is the system of checks and balances through verification and counter-verification. Because some of the nutrition services relate to behavior change (e.g., exclusive breastfeeding, complementary feeding, compliance with a regime of iron supplements), which are difficult to verify, these high-impact services have tended to be excluded from the PBF package. However, some of the newer World Bank operations are testing the limits of the verification challenge. The positive aspect of community counter-verification of some of these services is that it could generate local involvement and the potential to change community norms related to certain behaviors.
- **Capacity to deliver nutrition services.** The PBF approach provides health facilities a high degree of autonomy to organize themselves to deliver the services which are incentivized. Most of these services are at the core of medical training, whereas nutrition often occupies a very limited space in the medical syllabus. It may be necessary initially to offer service providers technical assistance to ensure they have sufficient capacity to deliver nutrition services.
- **Potential bias against services that are not incentivized.** As in any instrument incentivizing specific services, other (non-incentivized) services may be neglected. As noted earlier, this may pose a problem for nutrition because the services that need to be delivered likely exceed the capacity for a PBF to absorb.

- **Ensuring equitable distribution of the incentive.** To avoid conflict among staff, often the additional funds are just equally shared rather than based on individual performance, even though the whole health facility receives the additional funds based on performance. It is much more difficult to institute performance-based rewards at the individual provider level without large-scale reform of the human resource (HR) systems.
- **Workload of community health workers.** Some programs are exploring using PBF to incentivize community outreach through community health workers. While this approach holds promise for nutrition, the community health workers' range of duties and work volume needs to be considered to assess the feasibility of assigning them more tasks.

Examples of Country Experience

Armenia, Benin, Burkina Faso, Cameroon, Central African Republic, Democratic Republic of Congo, Djibouti, Dominican Republic, Gambia, Ghana, Haiti, Kenya, Lao Peoples Democratic Republic, Lesotho, Liberia, Malawi, Nigeria, Tajikistan, Tanzania, Zimbabwe, Zambia

➤ Performance Based Contracting (PBC)

Definition

- PBC takes place when service delivery is contracted out (or contracted in) often using non-state actors, e.g., international or national nongovernmental organizations (NGOs) or community-based organizations or for-profit private sector providers, and the contracts are performance-based.
- The contracts focus on the outputs, quality, or outcomes that tie at least a portion of the contractor's payment, contract extensions, or contract renewals to achieving specific, measureable performance standards. Although any contract would be expected to have a performance clause—and could be terminated in the case of non-performance—PBC links payment to performance more explicitly and based on specific services and outputs to be delivered.
- A standard package of health services is defined in the contract, which could include nutrition services. Performance is usually assessed (and payment made) based on delivery of the full agreed package, as opposed to PBF where payments are tied to individual services. The verification is at a more macro level than PBF, such as independent coverage surveys.
- PBC is usually focused mainly on health facility based services, although it typically also includes community activities (e.g., screening for severe acute malnutrition) to create demand for facility-based services.

Potential Strengths

- **Competitive selection.** Contracted entities have to compete to be selected, and again to have their contracts renewed at regular intervals. This competition brings to the fore available capacity, which the government may not have been able to tap into previously.
- **Alignment.** Often the selected entities were already delivering similar services in the area (perhaps at a smaller scale) but with relative autonomy from government and with direct financing from donors. PBC can serve to align the work of these entities with government priorities.

- **More rigorous than traditional contracts.** By linking payment to the quantity and quality of services delivered, as per agreed checklists, PBC is a better remedy for non-performance than traditional contracts, which usually have only a blunt remedy: the early termination of the contract.
- **Rapid increase in provision of services.** Particularly in fragile settings where health service delivery is compromised and services reduced, PBC usually translates into a rapid increase in the availability of services.
- **Flexibility in service delivery.** Because the contracted NGOs use their own management policies and procedures, they have more flexibility than a government entity to organize themselves for the particular challenges of service delivery, including hiring and firing staff according to needs and offering salaries aligned with market rates to attract qualified staff. This flexibility is potentially a significant advantage to deliver nutrition services because these often need to be adapted to the local context.
- **Multisectoral convergence for results.** Because PBC can be geographically based (i.e., a given geographical area is assigned to a particular contracted entity) and the entity is more flexible than traditional government ministries, the approach can facilitate multisectoral convergence to achieve certain results. This multisectoral convergence is particularly important for nutrition and has been a challenge when working through traditional ministries.
- **Local acceptability.** In areas of conflict, if the selection of the contracted entities places a strong emphasis on proof of having worked effectively in the particular context, it is likely that the entity will be better accepted by the local communities, as well as the parties in conflict. Often, an NGO with a long history of operating successfully in an area is selected and brings to the contract not only its technical and managerial capacity but also its positioning and knowledge of the local political economy.
- **Prioritization of services.** PBC involves defining a package of services (sometimes in tiers, such as a “basic package” an “enhanced package,” etc.), which is to be delivered under the contract. The process of defining the package (and adjusting it as needed) provides an opportunity to ensure that the health services offered are aligned with the burden of disease in the targeted area and with the latest evidence of what works to address that burden.

Potential Challenges

- **Government capacity to enforce contracts.** The PBC requires significant capacity for contract monitoring and enforcement, which can be lacking in some ministries of health. Technical assistance on contract management may be required as part of a World Bank operation using PBC.
- **Availability of providers.** In some settings where PBC has been used (e.g., fragile environments), a limited number of national organizations exist with the capacity to deliver good quality health services. The competitive selection process needs to include international entities, but also ensure that their knowledge and capacity to operate in the local environment is a key part of the selection process.
- **Challenging to terminate contracts.** Termination could be difficult to enforce because the government will need to find an alternative to continue service delivery and PBC can adjust for under-performance or higher performance. Termination requires unequivocal information.

AFGHANISTAN P112445 / P129663

TWO BACK-TO-BACK OPERATIONS INCORPORATED PBC AND PBF

P112446—STRENGTHENING HEALTH ACTIVITIES FOR THE RURAL POOR (SHARP) included contracting of NGOs with some performance based incentives complemented by PBF at the health facility level.

The project development objective (PDO) was to contribute to improving the health and nutritional status of the people of Afghanistan, with a greater focus on women and children and underserved areas of the country.

Results of interest. Improved service delivery coverage, including quality of care. Nutrition was part of the maternal and child health package. Health workers sent a report to the Ministry of Health, through NGOs, claiming payment for the delivery of health services. The request is now electronically submitted.

P129663—SYSTEM ENHANCEMENT FOR HEALTH ACTION IN TRANSITION (SEHAT)

The PDO is to expand the scope, quality, and coverage of health services provided to the population, particularly for the poor, in the project areas, and to enhance the stewardship functions of the Ministry of Public Health.

Indicators. Almost the same indicators are used for PBC and RBF, mainly for maternal and child health, such as skilled birth attendance and immunization coverage. But specific nutrition indicators have also been included, e.g., pregnant and lactating women receiving a package of infant and young child nutrition services; and under-five children with severe acute malnutrition who are receiving the requisite treatment. There is also one indicator on quality of care. Operational modality and the incentives remain the same as in SHARP.

but performance payments are also made at the NGO level. Thus performance bonuses are paid not only to the individual providers but also to the NGOs (20 percent based on performance). The implementation of NGO contracting is through performance based partnership agreements. Significantly, in addition to financing the service delivery contracts, the operation has considerable amounts of resources allocated to capacity building and system strengthening at the central and provincial levels.

Evaluation. Afghanistan has possibly the largest PBC operation in health/nutrition. Evaluation shows that coverage of health services has improved, and child/infant mortality has decreased. Maternal mortality has also decreased significantly.

- **Perceptions of government about beneficiary expectations.** In some settings, the government is uncomfortable not being seen by the population as the direct deliverer of services. It may be possible to alleviate this apprehension with an effective communication strategy explaining to the public the role of government is to regulate and purchase services.
- **Prioritizing nutrition.** In some settings, nutrition was not well defined in the package of services and was limited to a few interventions. For example, because some NGOs' recent experience in implementing humanitarian assistance projects focused on the treatment of severe acute malnutrition, there can be a tendency to assume that this nutrition intervention is sufficient. It may be necessary to review the package to define a clear set of nutrition interventions along with indicators to track in the information system to determine performance.
- **Timing of measurement.** In some cases, measurement of PBC performance has been done less frequently (i.e., every six or twelve months) than in PBF. Because the availability of data drives the performance reviews, the less frequent reviews results into slower corrections of bad performance and potentially weaker accountability.
- **Cost of measurement.** The surveys required to track performance, while useful beyond managing PBC contracts, can be costly. These surveys need to include a range of nutrition indicators and be well integrated into an overall national health management information system and nutrition surveillance system.

Examples of Country Experience

Afghanistan, Bangladesh, Cambodia, Pakistan, South Sudan



COMMUNITY LEVEL

⇒ Performance Based Community Contracts (PBCC) / Community PBF

Definition

- More recently, in combination with Community Driven Development (CDD) platforms—or sometimes riding on other community mobilization efforts—some countries have started using performance based community contracts (PBCC) to incentivize nutrition results. That is a type of PBF at the community level.
- Performance based contracts are signed with community groups and payments are made on the basis of results achieved.
- As for PPF, the results are verified before the payment is made and the results can include both quantitative and qualitative dimensions.
- Community-PBF can be either stand-alone or linked to operations that also establish performance contracts at other levels, e.g., facility, sub-national, and national.
- Unlike CDD, where the starting point is the community-expressed needs, with PBCC / community-based PBF, the starting point is a specific development objective (e.g., reducing child stunting). Intermediate results are selected based on a clear theory of change.

Potential Strengths

- **Collective action.** Community-based projects can facilitate collective action that would enable the removal of community-wide barriers that are creating nutrition problems. Some of these barriers can be social (e.g., social norms related to the role of men in caring for young children and / or about open defecation) or physical (e.g., building a bridge to ensure easier access to a health facility, or removing conditions that enable mosquitos to breed and transmit malaria). Nutrition programs have had success in using positive deviance (e.g., identifying which households have less malnutrition in a community and pinpointing which factors have led to that result) to identify priority key community barriers to better nutrition.
- **Multisectoral convergence.** Community-based projects, if well designed, can encourage communities to seek services from various ministries and enable the convergence to take place. This is important for nutrition, which requires a mix of sectoral interventions.
- **Flexibility of design.** The determinants of malnutrition and the socio-cultural barriers to change will vary by community. Community approaches enable communities to adapt global knowledge to their particular situations. However, that adaptation may require some external facilitation, e.g., through coaches.
- **Flexible definition of community.** Communities can be defined geographically, but particularly in countries where social exclusion is a challenge, communities can organize themselves and carry out projects on the basis of characteristics such as ethnicity, social class, caste, etc.
- **Quality checklists.** Quality checklists, which are generally associated with facility-level PBF, can also be used in PBCC or community-level PBF. The focus on quality, as seen earlier, is critical for the achievement of nutritional outcomes.
- **Can promote utilization of services.** Community-based contracts can be used to engage community groups to promote the use of health and nutrition services and even

MATERNAL AND CHILD NUTRITION AND HEALTH RESULTS PROJECT

Project development objective (PDO).

To increase the utilization of community nutrition and primary maternal and child health services in selected regions in the country. The results of interest include both improved nutrition and health among women and children.

Results of interest. Improved knowledge about exclusive breastfeeding, postnatal care, etc., some indicators on hygiene, e.g., cleaning up the village, etc., and sanitation, such as building of latrines, etc. Nutrition-specific results included: pregnant / lactating women, adolescent girls and / or under-five

children reached by basic nutrition services; children between 6–59 months receiving vitamin A supplementation; pregnant women receiving iron and folic acid supplement; children under 24 months benefiting from improved IYCF practices; and under-five children treated for moderate or severe acute malnutrition. Under the additional financing, the following nutrition-specific results were added: Baby-Friendly Community Initiative villages in the region; vulnerable households supported in gardening; and communities supported in establishing food banks.

Indicators. PDO-level indicators were children 0–6 months who are exclusively breastfed; deliveries attended by certified midwives in the preceding year; children aged 6–59 months who received a dose of vitamin A within the past twelve months; women using modern methods of family planning in the preceding year. Under the additional financing, the following PDO-level indicator was added: children age 6–23 months consuming at least four out of six food groups.

do referrals. One such nutrition approach is community screening to identify severe acutely malnourished children, an approach which significantly increases the use of free nutrition rehabilitation sessions. Some nutrition services, e.g., treatment of diarrhea with zinc supplements and oral rehydration solution can be effectively delivered in the communities themselves, thus reducing the need to consult a facility and addressing the financial barriers that limit access for the poor.

- **Social accountability.** Community involvement can create greater accountability at the local level, which can lead to a higher degree of transparency and consequently greater trust and program acceptance.

Potential Challenges

- **Communities do not always recognize nutrition as a problem.** Malnutrition may not be seen as a priority problem by communities partly because other pressing needs compete for attention, and partly because of lack of awareness about the magnitude of the malnutrition problem within the community, its causation, and available solutions. In communities where childhood undernutrition is widely prevalent, people may not recognize malnutrition as a critical problem since malnourished child are the norm. It may be beneficial to couple community-based PBF with awareness creation communications campaigns.
- **Challenge of verifying certain nutrition results.** The nutrition results that require community mobilization often include behaviors that are difficult to verify, e.g., exclusive breastfeeding or child complementary feeding behaviors. Because payments are linked to results, there is a risk that communities will learn to report the right results without the behaviors changing or changing behaviors but not to the extent reported. This challenge is not insurmountable, but it will require creativity of design.
- **Potential conflict of interest and capacity constraints for verification.** Community groups can also play a role in supervision and monitoring the PBCC operation—a watch-dog function. But this requires intensive technical assistance, facilitation or coaching.

- **Role / presence of the state.** Community-based RBF programs need to have an effective accompanying communications strategy to ensure that communities are aware when a program is part of a government strategy to enhance service delivery. Otherwise, some governments may resist using the approach and risk being perceived as having been replaced by community-based organizations “to do the government’s job.”
- **Capacity for nutrition.** Even when community organizations and their members recognize nutrition as a priority, they do not always have the required knowledge to analyze the causes of malnutrition in their community or to select evidence-based interventions to reduce it. For example, communities sometimes decide to carry out growth monitoring, but this is insufficient to improve childhood malnutrition. It must be complemented by appropriate nutrition counseling and / or supplementary feeding interventions demonstrated to caretakers, which is usually referred to as growth monitoring and promotion (GMP). This capacity challenge has been remedied in some World Bank operations by using tools (e.g., menus of options / decision trees) and coaches to facilitate community participation processes, specifically on nutrition.
- **Need local institutional capacity.** Though in principle, PBCC (PBF at the community level) could be used in the absence of a CDD operation, e.g., Cameroon, it is critically important to have some sort of community organization with which PBCC could operate. Often CDD operations provide the platform on which PBCC could be built, by establishing the requisite organizational framework through community mobilization efforts. In Djibouti, the existing CDD program provided a ready organizational platform. Without such preparatory efforts—either as part of CDD or not—or an existing community group such as women’s groups, a health promotion committee or a CBO, there would be no locus for PBCC.
- **Communities are not always cohesive.** Mobilizing communities could be a challenge, especially with governments that are reluctant to partner with NGOs and CBOs. Governments typically are not strong in community mobilization and need the help of NGOs or CBOs to accomplish it. Some geographic communities are not cohesive socially. In those cases, targeting by socially defined communities may be helpful or by introducing additional measures to improve social cohesion such as conflict prevention coaching in conflict-affected areas.

Examples of Country Experience

Afghanistan, Bangladesh, Benin, the Gambia, Ghana, India (state of Andhra Pradesh), Indonesia, Madagascar, Mauritania, Senegal, Nepal

⇒ **Community Driven Development (CDD)**

Definition

- Community Driven Development (CDD) has been practiced for several decades, with a view to ensuring that development assistance is not just dictated from the top, but that the people’s voices are heard, and development efforts are responsive to their expressed needs. Through participatory rural appraisals and other such techniques, CDD increases the involvement and participation of the beneficiaries in the planning, implementation, and oversight.
- Financing is provided to communities based on their own plans, addressing their own priorities and local approaches. The funds are spent on programs implement-

ed through community-based organizations with oversight by community leaders or committees.

- CDD requires strong community mobilization and capacity building, along with participatory planning and implementation. Most governments require technical support, and the involvement of community-based organizations.

Potential Strengths

- ***Ownership and local relevance.*** Community interventions in CDD programs are more likely to be locally relevant, socially acceptable, and successful due to strong community involvement and consequently heightened empowerment compared to other development programs. These aspects of CDD approaches are valuable in nutrition programs, which are highly dependent on behavior change to succeed, and those behaviors are anchored in local norms and traditions.
- ***Social accountability.*** Community involvement can create greater accountability at the local level, which can lead to a higher degree of transparency and consequently greater trust and program acceptance.
- ***Community contribution.*** Often communities provide a financial contribution as their “share” in the project. This helps build ownership and should enhance sustainability.
- ***Collective action.*** Community-based projects can facilitate collective action that would enable the removal of community-wide barriers that are creating nutrition problems. Some of these barriers can be social (e.g., social norms related to the role of men in caring for young children and / or about open defecation) or physical (e.g., building a bridge to ensure easier access to a health facility, removing conditions that enable mosquitos to breed and transmit malaria). Nutrition programs have had success in using positive deviance (e.g., identifying which households have less malnutrition in a community and pinpointing which factors have led to that result) to identify priority key community barriers to better nutrition.
- ***Multisectoral convergence.*** Community-based projects, if well designed, can encourage communities to seek services from various ministries and enable the convergence to take place. This is important for nutrition, which requires a mix of sectoral interventions.
- ***Flexibility of design.*** The determinants of malnutrition and the socio-cultural barriers to change will vary by community. CDD approaches enable communities to adapt global knowledge to their particular situations. However, that adaptation usually requires some external facilitation, e.g., through coaches.
- ***Flexible definition of community.*** Communities can be defined geographically, but particularly in countries where social exclusion is a challenge, communities can organize themselves and carry out projects on the basis of characteristics such as ethnicity, social class, caste, etc. Because some nutrition-related behaviors and barriers are specific to some communities, the flexibility inherent in CDD approaches should lead to better nutritional outcomes. CDD might be particularly effective in nutrition because several factors affecting nutrition-related behaviors are socio-cultural. Those factors include gender discrimination, household resource distribution, women’s health-seeking behavior, and the feeding and eating practices during pregnancy and infancy.

COMMUNITY ACTION FOR NUTRITION PROJECT

Project development objective (PDO).

The original PDO was “to improve attitudes and practices known to improve nutritional outcomes of women of reproductive age and children under the age of two.” The revised PDO is “to improve practices that contribute to reduced undernutrition of women of reproductive age and children under the age of two and to provide emergency nutrition and sanitation response to vulnerable populations in earthquake affected areas.” The project was restructured in 2015 to match the project’s results framework with community choices.

Results of interest. This project was developed specifically to address malnutrition in women of reproductive age and children under the age of two.

Indicators. PDO level indicators, revised during restructuring and dropping the indicators that sought to measure attitudes and refining others, include practices of pregnant women regarding iron and folic acid supplementation; breastfeeding practices of mothers with children 0–6 months of age; child feeding practices of households with children 6–24 months of age; households reporting no smoke in the room while cooking; pregnant women reporting consuming animal-sourced protein in the previous day; households reporting using improved toilet facilities; mothers (of children aged 0–2) reporting always washing hands at critical times.

Implementation modalities. At the ward level, there is a multisectoral committee to approve plans and account for results. Communities get financing which could include awards for households / individuals for their achievements, e.g., for households using the pit latrine most consistently. The Rapid Results Approach, i.e., results in 100 days, is being used. There is a social mobilizer / coach hired through the NGO and contracted by the government through the project in every village development council (VDC). Most of the coaches are from the local community and most of them are women. The coach guides the communities, assisting them in devising a proposal to reduce malnutrition in the community.

Potential Challenges

- **Communities do not always recognize nutrition as a problem.** CDD programs support what communities select as priorities and this may not prioritize malnutrition as the most urgent community problem. Malnutrition may not be seen as a priority challenge partly because other pressing needs compete for attention, and partly because of lack of awareness about the magnitude of the malnutrition problem within the community, its causation, and available solutions. In communities where childhood undernutrition is widely prevalent, people may not recognize malnutrition as a critical problem since malnourished children are the norm.
- **Risk of elite capture.** CDD may not be suitable for communities where a feudal culture of leadership exists. In such communities, even so-called community engagement may be captured by the most powerful members, defeating the idea of giving voice to the poor and vulnerable sections of the society. While a consultative process may occur during participatory planning, the process may not be truly inclusive.
- **Alignment with national plans.** Often communities will request support to build physical infrastructure such as health centers and schools. Unless the programs are strongly anchored in coordination mechanisms (which are often weak in developing countries), there is a risk of building infrastructures when a better solution might have been to address transportation problems (e.g., a bridge) to increase access to the infrastructures in neighboring communities. Increasingly, countries are developing GIS-enabled infrastructure maps (e.g., national health map) that should help CDD programs align with national infrastructure plans. This is not a particular risk for nutrition programs because community actions for nutrition do not require physical infrastructure.

- **Alignment with national systems.** Similar to the infrastructure point made above, a CDD project may finance a school, but may not have the necessary linkages with the national system to ensure that teachers and a regular budget is assigned to operate the school.
- **Role / presence of the state.** CDD programs need to have an effective accompanying communications strategy to ensure that communities are aware when a CDD program is part of a government strategy to enhance service delivery. Otherwise, some governments may resist using the approach and risk being perceived as having been replaced by community-based organizations “to do the government’s job.”
- **Community contribution.** As noted above, the community’s financial contribution should help enhance ownership and sustainability, but when criteria are strictly applied (e.g., insisting on a financial contribution instead of in-kind contribution) the poorest communities or the poorest members of communities may be excluded. This potential exclusion is highly relevant for nutrition because the poorest households tend to be the most affected by malnutrition.
- **Capacity for nutrition.** Even when community organizations and their members recognize nutrition as a priority, they do not always have the required knowledge to analyze the causes of malnutrition in their community or to select evidence-based interventions to reduce it. For example, communities sometimes decide to carry out growth monitoring, but this is insufficient to improve childhood malnutrition. It must be complemented by appropriate nutrition counseling and / or supplementary feeding interventions demonstrated to caretakers, which is usually referred to as growth monitoring and promotion (GMP). This capacity challenge has been remedied in some World Bank operations by using tools (e.g., menus of options / decision trees) and coaches to facilitate community participation processes, specifically on nutrition.
- **Communities are not always cohesive.** Mobilizing communities could be a challenge, especially with governments that are reluctant to partner with NGOs and CBOs. Governments typically are not strong in community mobilization and need the help of NGOs or CBOs to accomplish it. Some geographic communities are not cohesive socially. In those cases, targeting by socially defined communities may be helpful or by introducing additional measures to improve social cohesion such as conflict prevention coaching in conflict-affected areas.
- **CDD programs are typically dispersed in thousands of small communities.** Many of them may not have the necessary institutional arrangements, such as a development committee or a women’s group to mobilize and articulate their priorities or the capacity to develop plans and manage programs. This often requires strong technical support, usually through NGOs or CBOs. Monitoring the expenditures and results could become difficult to manage when the program is dispersed. Information and communication technologies are increasingly used to address this challenge.

Examples of Country Experience

Afghanistan, Bangladesh, Benin, the Gambia, Ghana, India (state of Andhra Pradesh), Indonesia, Madagascar, Mauritania, Senegal, Nepal



HOUSEHOLD / INDIVIDUAL LEVEL

⇒ *Conditional Cash Transfer (CCT) and Unconditional Cash Transfers (UCT)*

Definition

- **Cash transfers** are provided directly to targeted (poor) individuals and households to reduce their vulnerability through consumption smoothing. When used for nutrition, a secondary objective is to encourage behavioral changes that should result in improved nutritional outcomes. Such behavioral changes generally revolve around feeding and eating practices, girls' education, caring for infants and children, hygiene, and accessing health and nutrition services.
- Cash transfers can be conditional or unconditional, though the recent trend is toward the middle ground of soft conditions—behaviors are encouraged but compliance is not verified or enforced. When a nutritional objective is present, the transfers are combined with accompanying measures, such as communication campaigns and parenting classes, and the cash can be an effective “anchor” for nutrition messages.
 - **Conditional cash transfers (CCT)** involve disbursements based on verified compliance to the prescribed behavior, e.g., accessing institutional delivery, or bringing the baby in for growth monitoring or immunization, or nutrition counselling sessions.
 - **Unconditional cash transfers (UCT)** involve disbursements without a strict requirement for a specific behavior. This approach is more suitable for behaviors that are difficult to verify, e.g., exclusive breastfeeding, or increased food intake during pregnancy.
- **Soft conditionalities.** Even in operations designed as CCT, the conditionality is seldom strictly enforced. Beneficiaries are encouraged to attend parenting classes, growth monitoring and promotion sessions, cooking demonstrations and so on, but the payout is not conditioned upon their participation in such accompanying measures. Program evaluations suggest that soft conditionalities are just as effective as strict conditionalities.
- **Cash transfers have evolved over time**, going beyond risk management towards other development goals, such as reducing malnutrition. If nutrition objectives are to be formally superimposed on CCT / UCT operations, it is vitally important to apply the relevant knowledge and skills in preparation, implementation, and monitoring, and to target the all-important first 1,000 days.

Potential Strengths

- **Incentivizes behavior change.** Cash transfers move the incentive to the intended beneficiaries, i.e., the individuals in households whose behavior needs to change to improve nutrition (caretakers and those who influence them), and can be very effective—if designed and implemented well.
- **Targeting the most vulnerable.** Cash transfer programs rely on rigorous systems to target the most vulnerable, most often through a proxy means test that identifies the income poor. Household surveys have shown that these beneficiaries are more likely to be malnourished. Using the targeting system of cash transfer programs therefore could help to use more efficiently the scarce resources available for nutrition, especially for preventing undernutrition.

- **Filling a resource gap.** Cash transfers are an important part of a national nutrition strategy because— at least for the poorest and most vulnerable households—the availability of financial resources is a determinant of malnutrition. The cash will enable these households to purchase a balanced and safe diet (which is more expensive than the typical diets consumed by the poor) and health services. The cash could also free up time for caretakers to ensure children received adequate breastfeeding and complementary feeding.
- **Anchoring behavior change messages.** The cash transfer itself can serve as an “anchor” for nutrition messages, i.e., to capture the attention of household members to key nutrition messages that they might otherwise not notice due to competing priorities in their complex lives.
- **Addressing gender dynamics.** Cash transfer programs can be designed to correct household gender imbalances by empowering women. For example, the cash transfers are generally handed out to women rather than to the household head. This is likely to benefit nutrition (independent of whether or not nutrition messages are included with the cash transfer) because gender inequality is often a strong determinant of malnutrition.
- **Efficiency.** Direct transfers to individuals through cash transfer programs avoid elite capture and other inefficiencies that diminish the proportion of resources that reach households. For example, it may be more efficient to provide a household with a cash transfer and information encouraging them to purchase a product such as micronutrient powders or zinc tablets from the market rather than providing these same inputs for free through the public health system. The act of purchasing would create ownership for the effective use of the product.
- **Rapid response capability.** Cash transfer programs provide a platform for rapidly deploying an emergency response to crises such as floods, earthquakes, etc. Rapid deployment could help prevent or reduce the severity of the malnutrition which typically accompanies emergency situations.
- **Strong information systems.** Cash transfer programs require strong information systems to identify beneficiaries, track payments and, in the case of conditional transfers, to communicate the conditionalities or “co-responsibilities,” and to verify compliance. These same information systems can be used to communicate key nutrition messages.
- **Political visibility.** Cash transfer programs tend to be highly visible and usually benefit from strong political support. Adding a nutrition objective to a cash transfer program could also raise the profile of nutrition with policy-makers.

Potential Challenges

- **Requires strong management capacity and good governance.** Cash transfer programs require strong management arrangements to ensure effective administration of the cash transfer, mitigating moral hazard, preventing leakage of the cash, and monitoring actual compliance in the case of conditional cash transfers. This capacity requirement can be a challenge in some countries.
- **Limited feedback loops from UCTs.** While UCTs are easier to administer, they do not have built-in mechanisms to determine whether the desired behavior change has been achieved. Separate surveys or other ways of collecting data may therefore be required.
- **For CCTs, insure the service which constitutes the condition is available.** The supply of nutrition-related services is often a constraint in countries where malnutrition is highly prevalent. An incentive to the providers of the service in question may be help-

EMERGENCY SAFETY NETS PROJECT (JIGISÉMÉJIRI)

Project development objective (PDO).

To provide targeted cash transfers to the poor and food insecure households and to establish the building blocks for a national safety net system.

Results of interest. Poverty alleviation; safety net for the poor and food insecure; improving living conditions. Increasing access to social services. Nutrition is seen as a side effect. A nutrition program is being piloted as part of this operation. Every under-five child and pregnant women will receive a nutritional supplement (powdered milk + iron supplement + vitamin A), along with nutrition education.

Indicators. Nutrition-specific indicators include poor households / children receiving the nutritional package, i.e., the powder + education; households participating in the nutritional information session; households improving food consumption score, i.e., weighted score of 20 categories of food.

Operational modality. Unconditional cash transfer (UCT) combined with behavior change communication (BCC) in the five regions of the south—105 to 110 communities of 703 communities in the country. The cash transferred to poor household is accompanied by services and education / information.

The operation is linked to the National Health Insurance. The UCT targets the poor, but non-poor households can participate in the information session at the community level. A total of 62,000 households have been identified to be reached by July 2016. Consideration is being given to linking the beneficiaries of the UCT with the health program so that growth monitoring could be added to the operation. On average, 70 percent of the transfer is spent on food.

ful. In effect, such cases could combine a demand-side incentive through the CCT with PBF to incentivize the supply side. This increases the complexity and potentially the cost of the intervention.

- **Potential negative impact on intrinsic motivation.** When CCT is used to increase the utilization of predetermined services, the use of cash alone may affect what otherwise may have been an intrinsic motivation to seek a service. It may be possible that the prescribed services would not be highly valued by the community and that they may consider themselves to simply be paid to use the services, rather than fully valuing the usefulness of the service.
- **Sometimes financial incentives may not be enough to overcome entrenched beliefs and socio-cultural barriers.** It is often the case that the barriers to behavior change lie at the community level where norms are set. Therefore, information, education, and communication campaigns need to accompany any type of transfers that seek to change behaviors, and perhaps also community-based incentives.
- **Risk that the behavior change attained by a cash transfer program may not be sustained after the incentive stops.** In nutrition programs, if the cash was intended to finance food security and access to health services, it may be necessary to ensure continued availability of resources over relatively long periods. However, in a cash transfer program, which targeted households with children during the first 1,000 days, households could enter the program for a relatively shorter time. Cash transfer programs are increasingly focusing on concurrently building the capacity of households to become more productive so as to eventually “graduate” and become economically independent.

Examples of Country Experience

Bangladesh, Brazil, Burkina Faso, Cambodia, Djibouti, Ethiopia, Ghana, Guinea, Guatemala, India, Indonesia, Jamaica, Lao Peoples Democratic Republic, Lesotho, Madagascar, Mali, Nepal, Nicaragua, Pakistan, Republic of Congo, Rwanda, Sri Lanka, Tanzania

⇒ *Public Works Programs (PWP)*

Definition

- A public works program (PWP) involves the provision of temporary paid employment by the creation of predominantly public goods for targeted beneficiaries. The works are generally labor intensive and require few or no skills.
- PWP have traditionally financed the construction or rehabilitation of infrastructure (e.g., feeder roads, small dams, etc.) as well as works to preserve the environment (e.g., reforestation, terracing, etc.). However, these programs have started financing other forms of employment, which are more directly relevant for nutrition, such as agriculture and child care.
- A PWP functions as a form of productive social safety net by providing an income to targeted households or individuals in exchange for their labor. Payments can be in-kind or, more frequently, in cash. Wages are set sufficiently low to avoid substitution effects with other employment. Targeting is done either on the basis of income measures (e.g., proxy means test) or by self-targeting, by setting the wage sufficiently low to attract only poor people. Some programs intentionally target women, or have women quotas, and provide complementary services (e.g., child care) to enable their participation.
- In light of the obvious limitations of temporary employment, PWP are increasingly providing complementary services aimed at helping beneficiaries find sustainable livelihoods. They include various types of training, “forced” savings, and matching grants.
- The programs can be used as part of an overall national social protection strategy and / or provided in response to a humanitarian crisis.

Potential Strengths

- **Target the poor.** In addition to the poverty targeting (e.g., proxy means test), when the wages are set at the right level, PWPs create a self-targeting mechanism which tends to work well because only those poor enough to consider the low wages attractive will present themselves for work. Because of the link between poverty and nutrition, the participants of PWPs are more likely to belong to households with high levels of malnutrition.
- **Can provide a platform to transmit nutrition messages and build skills.** Increasingly, PWPs have a longer-term vision and contain skills development training to enable the individuals to overcome the barriers that are keeping them trapped in poverty. The training sessions offer a platform to transmit information about nutrition.
- **Could have sustainable livelihoods component linked to nutrition-related microenterprises.** The training and savings component of a PWP could encourage participants to develop microenterprises to meet specific nutrition needs of the community. For example, participants could develop local low-cost vitamin fortified complementary food for children.
- **Works can build nutrition-related infrastructure.** Even a more traditional PWP could apply a nutrition lens in the selection of the infrastructure that would be built or rehabilitated. Priorities could include, for example, latrines for girls at schools (to prolong school attendance for girls), infrastructure for irrigation, and storage of vitamin rich crops.
- **Good match with intrinsic motivation.** Because they have worked for their wage, the incentive may have less negative impact on intrinsic motivation. Participants would

PRODUCTIVE SAFETY NETS PROJECT 4 (PSNP-4)

Project development objective (PDO).

To increase access to safety net and disaster risk management systems, complementary livelihoods services and nutrition support for food insecure households in rural Ethiopia.

Results of interest. Improved household food security, livelihoods and nutrition, and enhanced household and community resilience to shocks.

Indicators. At the PDO-level, the project measures progress in transition to a social protection system; progress towards developing improved early warning triggers and agreed response mechanisms; the net number of months of food

insecurity for program participants; increase in average value of household assets; and access of client households to community-based nutrition services, including behavioral change communication provided under the national nutrition program. At the intermediate level, the project includes a few nutrition-specific indicators: clients reporting that they can provide adequate meals for their family for 12 months a year (male / female); transfers that have a value of at least 15 kg of cereals and 4 kg of pulses.

Operational modality. Public works program with cash or food is given. The cash component is the equivalent of 2,100 calories worth of food, cash or

e-payment. 80 percent of the households are paid in return for working in the public works. But these public works programs include attending behavior change sessions. Work requirements are exempted for pregnant women and those with young children. 20 percent of the households receive UCT (households without able-bodied members). The incentives are “soft” (encouraging) incentives / “nudges” not “hard” conditions. There has been an evolution of increasing attention to nutrition under PSNP. In the first PSNP, the only conditionality was that Ethiopia should have a nutrition policy. In PSNP-4, there is much more nutrition sensitivity.

feel they have earned their incentive, thus enhancing the sense of pride and self-respect among the beneficiaries.

- **Could provide a platform for community processes.** Inasmuch as PWP are opportunities for people to get together and work together, they could be used as a platform to start organizing the community for nutritionally minded collective action, e.g., removing conditions that enable mosquitos to breed and transmit malaria or improving access to water and the sanitary environment. The training provided by the program could provide a good starting point.
- **Potential for inter-sectoral convergence.** PWPs provide a great opportunity for inter-sectoral action. The benefits go beyond health or nutrition and could yield broader developmental impact. If a PWP sets itself an objective to contribute to improving nutrition, it can forge useful linkages with other relevant sectors. For example, the PWP can partner with the health system to identify malnourished kids in the families of the beneficiary workers, and provide nutrition services where required.
- **Flexibility for households.** If payments are in cash, households will dispose of additional income to spend freely. When combined with appropriate educational programs, the additional income could be put to good use and enhance food security and household nutrition status.
- **Non-controversial entry point for nutrition.** In countries that may have sensitivities related to their malnutrition rates, combining nutrition interventions into an existing PWP may be a good way to start remedying the problem.

Potential Challenges

- **Does not reach those who cannot work.** Those who are unable to work because of age, health status or family responsibilities are excluded from PWPs. So, complementary programs such as cash transfers should be available to reach those households.

- **No guarantees that nutrition behaviors will improve.** Payments are generally given to the workers, which in most cases mean payments will go to men. While poor women tend to prioritize investments in human capital when they obtain additional income—including better quality food, education and health services (all critical inputs for good nutrition)—this is less true when the income is controlled by men, especially if the PWP does not include communication on nutrition as an accompanying measure.
- **Labor-intensive works can be energy intensive and could actually aggravate malnutrition.** Most PWPs require hard physical labor, and the additional food purchased with the wages may not offset the caloric loss (or the worker may simply not increase his / her food intake and use the extra money for something else). In this situation, aggravating a low body mass index situation is a risk for participants. This poses a problem especially for women of child bearing age and would lead to low birth weight babies.
- **May be difficult to change the mindset.** Some public works agencies are accustomed to infrastructure work. It is a mindset change to have them work on social sector activities.
- **Horizon tends to be short-term.** In most cases, beneficiaries of PWP only work for a few months (4–6). There is therefore a risk that beneficiaries will focus only on short-term employment and the current earning needs of their households.
- **Nutrition may not be recognized as a priority.** Many of these social safety net programs may not prioritize nutrition in their results monitoring. They therefore may not result in nutritional improvements even if income poverty is alleviated.
- **Potential leakage and corruption.** In some countries these PWPs are a source of corruption through measures such as falsification of worker lists, etc. The problem tends to be more acute when payment is in-kind rather than through cash payments made directly to individual bank accounts.

Examples of Country Experience

Argentina, Bangladesh, Djibouti, Ethiopia, Guatemala, Democratic Republic of Congo

Non-Financial Incentives

Effective interventions to achieve nutritional impact will require a mix of financial and non-financial incentives. This section provides examples of non-financial incentives that could be considered at each level of the system. This is not a comprehensive list of non-financial incentives. An important first step in selecting non-financial incentives, as well as financial incentives, is to define a clear theory of change. It is also critical to understand the social environment in which the interventions will be introduced, including the norms and mental models of the stakeholders and beneficiaries. We recommend that readers consult the *World Development Report 2015: Mind, Society, and Behavior* for a more detailed discussion about this topic, which should inspire the selection of appropriate intervention design to best use non-financial incentives.



NATIONAL AND SUB-NATIONAL

- **Global SUN movement:** Prestige of joining “Scaling Up Nutrition / SUN” movement and the personal satisfaction related to learning from the SUN tools and networks.
- **Costing data:** Information on cost-effectiveness of nutrition interventions motivates decision-makers to invest for good social returns, e.g., World Bank costing studies.

- **Social change campaigns:** Visibility of behavior change campaigns can provide social capital for political leaders.
- **Bilateral dialogue:** When international donors include nutrition as part of their overall bilateral political dialogue, high-level decision-makers may be motivated, or in some cases coerced, to take action.
- **Rankings:** International rankings, e.g., Human Development Index, can serve as motivators.
- **Visits from leaders / summits:** World leaders' visits and international summits (e.g., World Bank meeting on stunting in October 2016) can draw attention to malnutrition and thus motivate policy-makers either to seek visibility or to avoid being shamed.
- **Campaigns and reports:** International campaigns and reports, e.g., Global Nutrition Report, can cast attention on the issue. Related in-country media coverage and debates can motivate leaders and policy-makers to take action.
- **Global events:** Events such as World Food Day and the related media coverage can motivate leaders and policy-makers to show what they have achieved in nutrition.
- **Regular use of data:** Annual "nutrition report cards" can generate interest from a range of stakeholders and motivate action. These require more robust data systems for nutrition than those currently in place.
- **Brand recognition:** Private companies can get motivated to take action on malnutrition because it will boost their brand.
- **Learning opportunities:** Leaders, policy-makers and other stakeholders such as journalists can be motivated to take action on nutrition through learning events such as conferences and targeted training programs (e.g., programs targeted at parliamentarians and media leaders).
- **Supportive supervision:** Program implementers at the national and sub-national level could be motivated by the feedback they receive through supervision.
- **Recognition:** Awards, either to individual leaders or to countries, can be powerful motivators.



HEALTH FACILITY

- **Information tools:** Having appealing information tools could motivate health workers to undertake good nutrition counseling.
- **Knowledge:** Well-trained health workers will be more motivated to include nutrition as part of a medical consultation. Too often, nutrition is missing from pre-service or in-service training of health workers.
- **Mass media campaigns:** While these campaigns are usually aimed primarily at households, they have been shown to also have a positive impact on the motivation of health workers.
- **Supportive supervision:** Health workers could be motivated by the feedback they receive through regular supervision.
- **Visibility:** A nutrition program could be designed to provide visibility for health facility workers, conferring them status in the community and possibilities of promotion into higher levels of the health system.
- **Recognition:** Awards are important motivators; these could be for individual workers or for entire health facilities.
- **Benchmarking:** The use of data to establish performance standards and then using these standards to compare health facilities, as done in PBF, could be a motivator for health facility workers.

- **Availability of supplies:** Without specific supplies, e.g., zinc supplements, some nutrition services cannot be offered. Long periods of stock outs of these supplies could demotivate workers to provide these services. Conversely, the availability of the supply could serve as a reminder that the services should be offered.



COMMUNITY

- **Information tools:** Having appealing information tools could motivate the community health worker or other community platforms to undertake good nutrition counseling. ICT tools appear to boost the status of the community health worker in communities where tools such as tablets and smart phone are still a novelty.
- **Knowledge:** Community workers are more motivated when they feel they have knowledge they can bring to the community. For example, the community is motivated by knowledge that they can take collective action in areas such as removing the conditions required for the transmission of malaria.
- **Shame:** Some social norms can be shifted through shaming, e.g., shifting the norms surrounding the role of men in child feeding practices, or the norms around open defecation.
- **Data:** Communities could be motivated by a sense of accomplishment that would come from knowing that their children are growing better or have lower levels of anemia. This would require having data platforms that send this signal to communities on a regular basis.
- **Positive deviance:** Positive deviance analysis, i.e., identifying households in the community where children are developing normally despite having access to similar resources, can be motivating to communities because it shows them that they have the ability to improve their situation with minimal need for external resources.
- **Visibility:** Highly visible programs, e.g., vitamin A distributions, can be motivating both for caretakers and for workers and thus reach high levels of coverage.
- **Priority access to services:** In some countries, community health workers may not receive a financial payment, but they have priority access to some free services such as health care and credit. This can serve as an important motivator, particularly if these services do not have the ability to cover the entire community.
- **Mass media campaigns:** While these campaigns are usually aimed primarily at households, they have been shown to also have a positive impact on the motivation of community workers.
- **Recognition:** Awards and other forms of recognition, either to individual workers or to entire communities, can serve as important motivators. An example is conferring on a community the status of being “open defecation free.”



HOUSEHOLDS

- **Information:** Parents who learn that well-nourished children perform better in school and earn more during their adult years are motivated to take action. Often caretakers are not performing certain behaviors because they do not know the benefits of the behavior.
- **Growth monitoring:** If accompanied by appropriate counseling, growth monitoring can be a powerful tool to motivate parents to take action when their child is growth faltering.
- **Mass media campaigns:** While these campaigns are usually aimed primarily at households, they have been shown to also have a positive impact on the motivation of health workers.
- **Nudges:** Encouraging households that receive a cash payment either as part of a cash transfer program or as part of a public works program could motivate parents to modify their

consumption patterns in favor of services and food that improve the nutritional status of women and children in the household.

- ***Availability of a product:*** When a product such as micronutrient powders to fortify a child's food directly on the plate is available in the household, it can serve as a motivator to change certain behaviors, in this case, starting complementary feeding at six-months of age.
- ***Recognition of status:*** Nutrition-related behaviors in a household involve several individuals, but in the past, most messages have been directed mainly at the mother. Recognizing that the grandmother and the father are important decision makers and directly involving them in interventions can serve as motivators for behavior change.
- ***Gender:*** Actions to increase the agency of women within the household are important motivators for these women, which can have an impact on malnutrition.



Conclusions

The right nutrition incentives at the right level

Nutrition is a vital aspect of a country's universal health coverage (UHC) policy. A well-nourished population contributes to national development and decreases poverty. An undernourished population—particularly malnourished mothers and children—contributes to the cycle of poverty that prevents nations from reaching their full potential. Malnutrition is also a driver of disparities and a serious impediment to achieving the objectives of key sectors, such as agriculture, education, social protection, and health. The World Bank's global experience and expertise in a range of sectors positions it to assist countries in establishing effective national nutrition programs and scaling up existing programs. An effective national nutrition program requires a multisectoral approach.

Successfully scaling up a country's multisectoral nutrition plans require the right incentives, including facilitating effective inter-sectoral collaboration and coordination. The financial and non-financial incentive mechanisms used effectively in health, education, and social protection programs can be equally effective in achieving behavior change to improve nutrition either as part of broader World Bank operations or as stand-alone nutrition projects or programs.

The systematic use of incentives in World Bank-financed operations to achieve nutrition objectives has been modest to date and deserves more attention. This document has explained the various financial and some of the non-financial incentives and at which level they should be used, i.e., national, sub-national, facility, community, household or individual. Explicit indicators should be included to measure nutrition results within the health, agriculture, education, social protection, water and sanitation, and other relevant sector operations.

Successfully scaling up a country's multisectoral nutrition plans require the right incentives.

An important element to the success of incentivized nutrition operations is identifying appropriate indicators and establishing robust systems to monitor and verify results in order to reward good performance promptly. This assumes, of course, the existence or the development of the necessary information systems and institutional mechanisms to monitor and evaluate nutrition interventions. Nutrition indicators are not always obvious. Most results-based, incentivized operations do not measure nutrition results directly—though many include results that indirectly contribute to nutrition, e.g., health status improvements, hygiene and sanitation, etc. The main constraint to including explicit nutrition indicators in results-based or incentivized operations appears to be the difficulty in identifying verifiable and easily measureable indicators to which payments can be linked. Nevertheless, this is possible, as demonstrated by the successful operations mentioned in this document.

Nutrition programs need to identify the most suitable incentives according to context—which vary greatly by country and region, and even by community. The starting point in the choice of financial and non-financial incentives will be to assess the nutrition system in a given country and define a clear theory of change that addresses the most binding constraints. The various incentives will be more effective at the different levels and usually, a combination of incentives will be required. Financial incentives need to be carefully calibrated with non-financial incentives to achieve a positive impact without a negative impact on intrinsic motivation.

Incentivized approaches for nutrition are implemented within a wider political economy context. World Bank staff should seek opportunities to generate windows of opportunities and to create them if necessary. Nutrition champions need to be identified and supported. This might also mean placing the oversight for an operation under the Ministry of Health or the Ministry of Social Welfare or other ministries where champions could be found with a commitment to nutritional goals.

Because of the very strong role of households and communities in determining nutrition status, household and community-based incentive mechanisms may become the more natural choice for nutrition operations, such as Community Driven Development (CDD) or Performance Based Community Contracts (PBCC), and beneficiary level incentives, i.e., Cash Transfers (CT) and Public Works Programs (PWP), although Development Policy Financing (DPF), Program for Results (PforR), Performance Based Financing (PBF), and Performance Based Contracting (PBC) are also feasible, depending on the level at which the main constraints are faced.

Supporting Task-Teams and Leaders to Incentivize Nutrition Programming

To assist task-teams and leaders in developing, implementing, and monitoring incentivized programs for nutrition, as well as in incorporating nutrition results in other relevant operations, a Practitioner's Compendium compliments this report. The compendium offers practical information on how plan incentivized operations for improving nutrition results for World Bank client countries, along with country examples and nutrition indicators for monitoring progress.

A number of other resources are available to support task teams in scaling up nutrition, including:

- **EXPERIENCED STAFF:** A group of World Bank staff have technical knowledge and experience in integrating nutrition into national policies and programs. This group operates as

a community of practice and is one of the Global Solutions Groups within the Health, Nutrition and Population Global Practice, under the leadership of the Global Solutions Lead, Meera Shekar (mshekar@worldbank.org). They can be integrated into World Bank task teams to support policy dialogue and operations.

- **SWAT TEAM:** The staff in the Global Solutions Group for nutrition and short-term consultants are available for rapid mobilization as part of the World Bank response to country requests for technical assistance in policy reform, program design, implementation support evaluation, etc.
- **REFERENCE MATERIALS:** A number of technical guidance notes and other reference materials are available to guide teams. See Annex 2 of the Practitioner’s Compendium.
- **TRUST FUNDS:** A number of trust funds are available to support country teams in scaling up nutrition, including:
 - Japan Trust Fund
 - Power of Nutrition Trust Fund
 - Global Financing Facility (GFF) Trust Fund for Every Woman Every Child
 - Global Agriculture and Food Security Program (GAFSP) Trust Fund
 - Strategic Impact Evaluation Fund (SIEF) Trust Fund
 - Rapid Social Response (SRS) Trust Fund
 - Early Learning Partnership
- **ADDITIONAL SUPPORT:** Several donors and partners are discussing with the World Bank how they can best support the Bank in scaling up its financing of operations to prevent stunting.

ANNEX 1. Evidence Review of Financial Incentive Mechanisms

Background

This annex summarizes a literature review conducted to document the impact of financial incentive mechanisms on nutrition-related outcomes in low- and middle-income countries. Specifically, the review focused on eight mechanisms that the World Bank has incorporated into projects and initiatives to incentivize results. The mechanisms include: development policy lending, program-for-results, performance-based budgeting, performance-based financing, performance-based contracting, conditional cash transfers, unconditional cash transfers, and public works programs.

Methods

This review included studies from six electronic databases: Cochrane Library, EconLit, MEDLINE, ScienceDirect, Scopus, and Web of Science. The names of each financial incentive mechanism, and common synonyms, were used as the search terms. The titles and abstracts of the studies were screened for relevance. The full texts of potentially relevant articles were reviewed to identify those that met the inclusion criteria. Finally, the reference lists of included articles were searched for other relevant studies.

The key inclusion criteria related to study design and outcomes. Included in the study were only non-randomized and randomized controlled trials, interrupted-time series analyses, controlled before-and-after studies, and pooled cross-sectional studies with matching. For outcomes, the only studies included were those that examined anthropometric and nutrition outcomes, nutrition-related health care utilization, and nutrition-related health behavior. For more details about the methods and inclusion criteria, please refer to the full review.

If a systematic review had already evaluated the impact of an incentive mechanism on the outcomes of interest using similar inclusion criteria, we used that review as a starting point for our own research. We then only looked for additional studies published after the search date in the previous review of that particular incentive. We summarized the evidence in the form of a narrative review. We did not conduct meta-analyses to combine the findings from independent studies, given the differences in the study methods used, the designs of the incentive mechanisms, and the country settings.

Results

1. DEVELOPMENT POLICY LOANS

No studies were identified that evaluated the impact of development policy loans (DPL) on any of the nutrition-related outcomes of interest. A 2015 World Bank report on DPLs found that such loans have generally met or exceeded expectations based on the Implementation Completion and Results reports. However, more rigorous analyses of such operations are needed to determine their effectiveness in meeting the stated aims, as well as DPLs' suitability for incentivizing nutrition programs.

2. PROGRAM-FOR-RESULTS FINANCING AND DISBURSEMENT-LINKED INDICATORS

No studies were identified which evaluated the impact of program-for-results (PforR) financing or disbursement-linked indicators on any of the nutrition-related outcomes of interest. PforR financing is relatively new, with the World Bank first piloting it in 2012. In 2015, the Bank published a two-year review of the early experiences using the financing instrument. The review concluded that PforR financing has been used in a variety of countries and sectors, with implementation broadly on course for most of the operations. However, more rigorous evidence is needed to understand the impact of PforR financing on nutrition-related outcomes.

3. PERFORMANCE BASED BUDGETING

For performance based budgeting (PBB), two studies met the inclusion criteria. One randomized controlled trial (RCT) was conducted in Indonesia; one controlled before and after (CBA) study was conducted in Argentina. Overall, more high-quality evidence is needed to understand the impact of this form of budgeting on nutrition-related outcomes.

Two studies evaluated the impact of PBB on nutrition and / or anthropometric outcomes, with mixed results. Two studies evaluated the impact of PBB on nutrition-related health care utilization and immunization coverage, also with mixed results. No studies were identified that evaluated the impact of PBB on nutrition-related behavior change, such as rates of exclusive breastfeeding or handwashing.

4. PERFORMANCE BASED FINANCING

For performance based financing (PBF), 20 studies met the inclusion criteria. Most were controlled before-and-after studies conducted in Sub-Saharan African countries. A 2012 Cochrane review assessed the impact of PBF on health care outcomes and utilization in low- and middle-income countries.

Only three studies examined the impact of a PBF scheme on any nutrition or anthropometric outcomes—with mixed results. Sixteen studies examined the impact of PBF schemes on the use of various nutrition-related health care services. In general, the studies found that PBF schemes had no effect on the uptake of antenatal care, but raised the use of postnatal care among women. The studies also usually found that PBF increased the use of preventive care but not curative care among children. The evidence is mixed on the impact of PBF on the use of vitamin and mineral supplements.

Ten studies investigated the impact of PBF on rates of vaccination against various diseases, mostly in Burundi and Rwanda. The results were mixed on whether PBF increases immunization coverage. Only one study examined the impact of PBF on nutrition-related healthy behavior. It found a PBF scheme in Rwanda had no impact on the proportion of women breastfeeding for at least six months after birth.

5. PERFORMANCE BASED CONTRACTING

For performance based contracting (PBC), seven studies met the inclusion criteria. Most of them were controlled before-and-after studies conducted in fragile or post-conflict states. A 2009 Cochrane review evaluated the impact of contracting out health care delivery on health outcomes and the use of health care services in low- and middle-income countries.

No studies evaluated the impact of PBC on nutrition and / or anthropometric outcomes. Seven studies examined the impact of contracting out and / or contracting in health services on health care utilization rates. In general, these schemes improve the coverage of health care services—with the exception of antenatal care.

Four studies have investigated the impact of PBC on rates of vaccination against various diseases. The results were mixed on whether such schemes improve immunization coverage. No studies were identified that evaluated the impact of PBC on nutrition-related behavior change—such as any increase in the rates of exclusive breastfeeding or handwashing.

6. CONDITIONAL CASH TRANSFERS

For conditional cash transfers (CCT), 22 studies met the inclusion criteria. Most of the studies were randomized controlled trials in Latin America. Three systematic reviews, one of them published by the Cochrane Collaboration, assessed the impact of CCTs on health outcomes and health care use in low- and middle-income countries.

Thirteen studies analyzed the impact of CCTs on nutrition and / or anthropometric outcomes in children. These studies found that CCT programs can improve growth, weight, and height-for-age in children, as well as reduce the probability of children being anemic, chronically malnourished, stunted, and underweight. However, the results were not significant for all outcomes or for all age groups of children. Nine studies examined the impact of CCTs on the use of nutrition-related health care services. They found that CCT programs increased the frequency of preventive health visits by mothers and children, the proportion of women receiving antenatal care, and the percentage of children having their nutritional status monitored.

Six studies investigated the impact of CCTs on rates of childhood vaccinations. The results were mixed as to whether CCTs improved immunization coverage. No studies were identified that evaluated the impact of CCTs on nutrition-related behavior change, such as the rates of exclusive breastfeeding or handwashing.

7. UNCONDITIONAL CASH TRANSFERS

For unconditional cash transfers (UCTs), 14 studies met the inclusion criteria. Most of the studies were randomized controlled trials. A 2015 Cochrane review evaluated the impact of UCTs distributed during humanitarian crises in low- and middle-income countries on health outcomes and the use of health services.

Ten studies evaluated the impact of UCTs on nutrition and / or anthropometric outcomes, with mixed results. Seven studies examined the impact of UCTs on the use of various nutrition-related health care services—also with mixed results.

Only three studies evaluated the impact of UCTs on vaccination rates. None of the studies found that UCTs had a statistically significant impact on immunization coverage. No studies were identified that evaluated the impact of UCTs on nutrition-related behavior change, such as rates of exclusive breastfeeding or handwashing.

8. PUBLIC WORKS PROGRAMS

No studies were identified that evaluated the impact of public works programs (PWP), including labor-intensive public works, on any of the nutrition-related outcomes of interest. Two reports

published by the World Bank in 2009 and in 2013 documented country experiences with public works programs. The reviews pointed to the importance of clear objectives, careful design and implementation, and functioning monitoring and evaluation systems. However, more high-quality evidence is needed to understand the impact of public works programs on nutrition-related outcomes.

Discussion

There is evidence that the financial incentive mechanisms reviewed can positively influence nutrition and related outcomes among children. However, most of the evidence has focused on health outcomes and health care utilization. Far less attention has been paid to nutrition, with the notable exception of cash transfers. Scant evidence exists about the impact of incentive mechanisms on nutrition-related health behavior, such as breastfeeding and complementary feeding practices.

In many of the studies reviewed, there was variation in the effects of treatment between subgroups, e.g., rural versus urban children, and children in different age groups, etc. Also, the results were not statistically significant for all nutrition outcomes or for all types of health care services.

The design and implementation of the mechanisms often differs markedly across countries, which might explain some of the variations in study findings. The duration of follow-up also differed across studies. Therefore, it is difficult to draw general conclusions on the mechanisms' impact.

Not surprisingly, three of the four incentive mechanisms for which little or no evidence was found, i.e., development policy loans, program-for-results financing, and performance based budgeting, are mechanisms that aim to shape international, national, or sub-national priorities. It is difficult to evaluate such types of mechanisms using randomized controlled trials or other rigorous study designs.

Important questions remain about each of the financial incentive mechanisms. The sustainability and cost-effectiveness of these mechanisms is uncertain, particularly when it comes to scaling up nutrition programs. It is also difficult to disentangle the effects of individual mechanisms when multiple mechanisms are present in a country. Additional research is needed to shed light on the relative importance of supply-side and demand-side measures, although that is likely to be context-specific.

Finally, most of the studies reviewed have been unable to pinpoint the pathways by which the incentive mechanisms improve nutrition. In CCT programs, for instance, the dissemination of health, nutrition, and hygiene information to mothers and pregnant women—which is a component of most transfer programs—is probably a key factor driving improvement in child nutrition. Children are also required to take nutritional supplements as part of some CCT programs. Moreover, the conditions attached to the cash transfers, as well as the size of the transfers, usually differ across programs. Most studies have not been able to determine which of these factors are most important in explaining any observed impact.

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ANNEX 2. Glossary of Nutrition Terms

TERM	DEFINITION <i>(adapted from World Bank. 2013. Improving Nutrition Through Multisectoral Approaches. Washington, DC: World Bank.)</i>
<i>First 1,000 days</i>	The period of time, or window of opportunity, from conception to 2 years old, in which nutritional requirements are substantial and damage from malnutrition is largely irreversible.
<i>Anthropometry</i>	The study and techniques of measuring the human body. Anthropometric measurements are often used to compare or classify individuals or population groups.
<i>Community-based management of acute malnutrition</i>	The management of acute malnutrition through (1) inpatient care for children with severe acute malnutrition with medical complications and infants under 6 months old with visible signs of severe acute malnutrition; (2) outpatient care for children with severe acute malnutrition; and (3) community outreach.
<i>Complementary feeding</i>	The introduction of other foods and liquids when breast milk alone is no longer sufficient to meet the nutritional requirements of infants. The transition from exclusive breastfeeding to family foods typically covers the period from 6–24 months old, even though breastfeeding may continue beyond 2 years old. This is a critical period of growth during which nutrient deficiencies and illnesses contribute globally to higher rates of undernutrition among children under 5 years old. Complementary food is any food, whether manufactured or locally prepared, given in addition to breast milk (or a breast milk substitute) to satisfy the nutritional requirements of the child.
<i>Deworming</i>	Periodic drug treatment with an anthelmintic to purge the body of soil-transmitted helminths, such as roundworm, whipworm, and hookworm. Soil-transmitted helminths impair nutrition status through loss of iron and protein, and malabsorption of and competition for nutrients. WHO estimates that over 270 million preschool children and over 600 million school-age children are living in areas where these parasites are intensively transmitted and in need of treatment and preventive interventions.
<i>Dietary diversity</i>	The number of food groups consumed over a given period of time used as an indicator of household food security and diet quality.
<i>Double burden of malnutrition (DBM)</i>	The simultaneous occurrence of undernutrition and overweight or obesity in the same community, household, or individual. The DBM is linked to two simultaneous global transitions: (1) the nutrition transition, which refers to the shifting dietary consumption and energy expenditures that coincide with economic, demographic, and epidemiological changes, such as modernization, urbanization, economic development, and increased wealth; and (2) the epidemiological transition that accounts for the replacement of infectious diseases by chronic diseases over time and refers to the pattern of increased population growth rates, due to improved public health, sanitation and disease therapy and treatment, followed by a releveling of population growth, due to subsequent declines in fertility rates.

TERM**DEFINITION** *(adapted from World Bank. 2013. Improving Nutrition Through Multisectoral Approaches. Washington, DC: World Bank.)*

Food security	When all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.
Food system	A collaborative network that integrates sustainable food production, processing, distribution, consumption, and waste management in order to enhance the environmental, economic, and social health of a particular place.
Food fortification	The addition of one or more micronutrients (vitamins and minerals) to a food during processing. Ideally, food fortification provides a public health benefit with minimal risks to health in the population.
Growth monitoring	Growth monitoring follows the growth rate of a child in comparison to a standard by periodic, frequent, anthropometric measurements in order to assess growth adequacy and identify faltering early. Growth Monitoring & Promotion (GMP) consists of growth monitoring combined with counseling to increase awareness of child growth, improve caring practices, and increase demand for other nutrition-related services.
Hunger	A feeling of discomfort, illness, weakness, or pain due to a prolonged lack of food.
Infant and Young Child Feeding (IYCF)	Refers to specific recommendations and guiding principles for feeding children between birth and 24 months old for optimal nutrition, health, and development. A set of eight core population-level indicators ⁴⁰ have been developed to assess feeding trends over time; improve targeting of interventions; and monitor progress in achieving goals and evaluating the impact of interventions. The principles include: <ul style="list-style-type: none">• Early initiation of breastfeeding—initiation of breastfeeding within one hour of birth.• Exclusive breastfeeding for infants under 6 months old—the feeding of an infant only with breastmilk from his or her mother or a wet nurse, or expressed breastmilk, and no other liquids or solids except vitamins, mineral supplements, or medicines in drop or syrup form.• Continued breastfeeding at 1 year—children 12–15 months old who received breast milk during the previous day.• Introduction of solid, semisolid or soft foods—infants 6–8 months old who receive solid, semisolid or soft foods.• Minimum acceptable diet—a composite indicator consisting of both minimum dietary diversity (children 6–23 months old receiving foods from four or more food groups) and minimum meal frequency (children 6–23 months old receiving solid, semisolid, or soft foods the minimum number of times per day or more).• Consumption of iron-rich or iron-fortified foods—children 6–23 months old who receive an iron-rich food or iron-fortified food that is specially designed for infants and young children or a food that is fortified in the home.

⁴⁰ WHO (World Health Organization). 2008. Indicators for Assessing Infant and Young Child Feeding Practices. Conclusions of a Consensus Meeting held November 6–8, 2007. Washington, DC: WHO.

TERM**DEFINITION** (adapted from World Bank. 2013. *Improving Nutrition Through Multisectoral Approaches*. Washington, DC: World Bank.)***Intergenerational cycle of malnutrition***

Also referred to as the undernutrition cycle, a concept that describes how growth failure is transmitted across generations through the mother. The theory links undernutrition in the various stages of development: Small adult women are more likely to have low-birth-weight babies; children born with a low birth weight are more likely to suffer from growth failure during childhood; girls born with a low birth weight are more likely to become small adult women; and adolescent girls who become pregnant are even more likely to have low-birth-weight babies.

A child born weighing less than 2,500 grams is categorized as having a low birth weight. At the population level, the proportion of infants with a low birth weight often serves as an indicator of a multifaceted public health problem that includes long-term maternal malnutrition, ill health, hard work, and poor health care in pregnancy.

Lean or hunger season

Refers to the period between planting and harvesting, when food supplies can become scarce. Families may have to sell livestock, farming tools, and other assets to pay for food. During this period, poor farmers are at increased risk for malnutrition.

Malnutrition

Poor nutritional status caused by deficiency (undernutrition) or excess.

Commonly used anthropometric measures of nutrition status include:

- Stunting (chronic malnutrition)—low height for age, defined as more than 2 standard deviations below the mean of the sex-specific reference data. Stunting is the cumulative effect of long-term deficits in food intake, poor caring practices, and illness.
- Wasting (acute malnutrition)—low weight for height, defined as more than 2 standard deviations below the mean of the sex-specific reference data. Wasting is usually the result of a recent shock, such as lack of calories and nutrients or illness, and is strongly linked to mortality.
- Underweight—low weight for age, defined as more than 2 standard deviations below the mean of the sex-specific reference data.

Other anthropometric indicators are commonly used for program purposes, including:

- MAM (moderate wasting)—weight for height between 2 and 3 standard deviations below the mean of sex-specific reference data.
- AM (severe wasting)—weight for height more than 3 standard deviations below the mean of sex-specific reference data.
- Global acute malnutrition (moderate and severe wasting combined)—weight for height more than 2 standard deviations below the mean of sex-specific reference data.
- Moderate malnutrition (moderate underweight)—weight for age between 2 and 3 z-scores below the mean of sex-specific reference data.
- BMI is a measure of body fat, calculated as weight in kilograms (kg) divided by the square of height in meters (m²). Other measures of nutrition status are calculated using BMI. Overweight is defined as a BMI between 25 and 30 kg/m². Obesity is defined as a BMI of 30 or more. Although BMI is a good measure for determining a range of acceptable weights, it does not take into consideration some important factors, such as body build, the relative contributions of fat, muscle, and bone to weight.

TERM**DEFINITION** *(adapted from World Bank. 2013. Improving Nutrition Through Multisectoral Approaches. Washington, DC: World Bank.)****Micronutrient deficiency***

- Also referred to as hidden hunger, the lack of one or more micronutrients, often caused by disease or lack of access to or consumption of micronutrient-rich foods such as fruit, vegetables, animal products, and fortified foods. Micronutrients are vitamins and minerals that are needed by the body in small amounts to produce enzymes, hormones, and other substances essential for proper growth and development. Micronutrient deficiencies increase the severity and risk of dying from infectious diseases such as diarrhea, measles, malaria, and pneumonia. More than two billion people in the world are estimated to be deficient in iodine, vitamin A, iron, or zinc. Common micronutrient deficiencies include:
- Anemia—the condition of having a hemoglobin concentration below a specified cut-off point, which changes according to age, gender, physiological status, smoking habits, and the altitude at which the population being assessed lives. WHO defines anemia in children under 5 years old and pregnant women as a hemoglobin concentration of less than 110g/l at sea level. It is estimated that 50 percent of anemia worldwide is due to iron deficiency. Other causes of anemia include malaria and other parasitic infections; acute and chronic infections that result in inflammation and hemorrhages; deficiencies in other vitamins and minerals, especially folate, vitamin B12, and vitamin A; and genetically inherited traits, such as thalassemia.
- Iron deficiency—the most common nutritional deficiency in the world, resulting from insufficient iron in the body due to inadequate consumption of bioavailable iron, blood loss, or unmet increased iron requirements due to infection, pregnancy, rapid growth, dietary habits, or any combination of these.
- Iron deficiency anemia—the condition in which a deficiency in iron causes an insufficiency of healthy red blood cells. Iron deficiency and iron deficiency anemia are associated with fetal and child-growth failure, compromised cognitive development in young children, lowered physical activity and labor productivity in adults, and increased maternal morbidity and mortality. Women and young children are the most vulnerable to iron deficiency anemia, which increases the risk of hemorrhage and sepsis during childbirth, and is implicated in 20 percent of maternal deaths. Furthermore, children with iron deficiency anemia suffer from infections, weakened immunity, learning disabilities, impaired physical development, and in severe cases, death.
- Iodine deficiency—the condition resulting when iodine intake falls below the recommended level of 100-199g/l, tested through median urinary iodine concentration.
- Iodine deficiency disorders—the consequences of iodine deficiency in a population that can be prevented by ensuring that the population has an adequate intake of iodine. Iodine deficiency disorders can affect children at any stage of rapid growth, with the greatest negative effect on cognitive development occurring during pregnancy. Symptoms range from mild impairment of brain development and subtle degrees of brain damage, goiter, hypothyroidism, reproductive disorders (spontaneous abortion, stillbirth,

TERM**DEFINITION** (adapted from World Bank. 2013. *Improving Nutrition Through Multisectoral Approaches*. Washington, DC: World Bank.)***Micronutrient deficiency, (continued)***

hypothyroidism, reproductive disorders (spontaneous abortion, stillbirth, congenital abnormalities, and perinatal mortality) to its most severe form, cretinism. Iodine deficiency is the primary cause of preventable mental retardation and brain damage in the world

- Vitamin A deficiency—the condition resulting when vitamin A intake falls below recommended levels. Vitamin A deficiency may be exacerbated by high rates of infection and greatly increases the risk that a child may die from diseases such as measles, diarrhea, and acute respiratory infections. It is the leading cause of childhood blindness. Vitamin A deficiency compromises the immune systems of approximately 40 percent of the developing world’s children under 5 years old and leads to the deaths of as many as one million young children each year.
- Zinc deficiency—the condition resulting when zinc intake falls below recommended levels. Zinc deficiency is associated with growth retardation, malabsorption syndromes, fetal loss, neonatal death, and congenital abnormalities. Zinc supplementation reduces the duration and intensity of diarrheal illnesses and reduces clinical disease caused by acute respiratory infections and malaria.

Nutrition education

Encompasses a wide range of efforts to improve nutrition outcomes by changing nutrition practices, including one-to-one counseling and BCC, and leverages available communications channels including IEC, social media, and community-level education and mobilization.

Nutrition security

The ongoing access to a balanced diet, adequate care and feeding practices, a safe and clean environment, clean water, and adequate health care (both preventive and curative) for all people, and the knowledge needed to care for and ensure a healthy and active life for all household members.

Nutrition-sensitive

Interventions that address the underlying and basic determinants of maternal, fetal, and child nutrition and development, including food security; adequate caregiving resources at the maternal, household and community levels; and access to health services and a safe and hygienic environment, and incorporate specific nutrition goals and actions. Nutrition-sensitive programs can serve as delivery platforms for nutrition-specific interventions, potentially increasing their scale, coverage, and effectiveness. Examples include programs for agriculture and food security; SSNs; early childhood development; maternal mental health; women’s empowerment; child protection; schooling; WASH; and health and family planning services.⁴¹

⁴¹ Ruel, M.T., Alderman, H., and the Maternal and Child Nutrition Study Group. 2013. The *Lancet* series on Maternal and Child Nutrition. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? Vol. 382: 536-551.

TERM**DEFINITION** (adapted from World Bank. 2013. *Improving Nutrition Through Multisectoral Approaches*. Washington, DC: World Bank.)***Nutrition-specific***

Interventions that have an immediate and direct impact on maternal, fetal, and child nutrition and development, including adequate food and nutrient intake, feeding, caregiving and parenting practices, and low burden of infectious diseases. Examples include adolescent, preconception, and maternal health and nutrition; maternal dietary or micronutrient supplementation; promotion of optimum breastfeeding; complementary feeding and responsive feeding practices and stimulation; dietary supplementation; diversification and micronutrient supplementation or fortification for children; treatment of SAM; disease prevention and management; and nutrition in emergencies.⁴²

Oral rehydration therapy

A type of fluid replacement used to prevent or treat dehydration, especially that due to diarrhea, which is defined as the passage of three or more loose or liquid stools per day or more frequently than is normal for the individual. Diarrhea is usually a symptom of gastrointestinal infection, which can be caused by a variety of viral and parasitic organisms. Severe diarrhea leads to fluid loss and plays a particularly important role in nutrition and growth faltering, because it can lead to malabsorption of nutrients and appetite suppression. The adjusted odds of stunting at 24 months old increases by 5 percent with each episode of diarrhea in the first 24 months of life.

An oral rehydration solution is a liquid electrolyte solution that is used for the management of diarrhea among children. It is typically distributed in ready-to-use sachets that are added to one liter of clean water.

Psychosocial stimulation

The maternal-infant bond formed at the beginning of life is essential for cognitive, emotional, and social development later in life. Feeding and other care practices provide opportunities for psychosocial stimulation and help to establish a positive attachment between caregiver and child.

School garden

A small plot or plots within school grounds or nearby—typically managed by the schoolchildren with the help of parents, teachers and other community stakeholders—where a variety of crops are grown for the purpose of learning, recreation, and improving diets. Crops commonly include vegetables, fruits, legumes, tubers, and nonfood plants including medicinal herbs, spices, and fuel material that are grown throughout the year. Sometimes small livestock and fish are raised.

Smallholder farmer

Marginal and submarginal farm households that own or cultivate typically less than two hectares of land. Smallholder farmer households constitute a large proportion of the population in the developing world and of households living in poverty and hunger.

⁴² Ruel, M.T., Alderman, H., and the Maternal and Child Nutrition Study Group. 2013. The *Lancet* series on Maternal and Child Nutrition. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? Vol. 382: 536-551.

TERM**DEFINITION** (adapted from World Bank. 2013. *Improving Nutrition Through Multisectoral Approaches*. Washington, DC: World Bank.)***Specialized nutritious foods***

A wide range of foods aimed at improving nutritional intake, including:

- Fortified blended foods, such as corn soya blend and wheat soya blend.
- Point-of-use or ready-to-eat foods, commonly lipid-based nutrient supplements, such as ready-to-use therapeutic food, which is a high-energy and protein-rich food with added electrolytes, vitamins and minerals, specifically designed to treat SAM in the rehabilitation phase, and ready-to-use supplementary food, which is a high-energy nutrition supplement particularly suited as a nutritional support in emergency situations or in the context of nutritional programs for the prevention or treatment of moderate malnutrition and deficiency-related illnesses. Typically oil- or peanut-based, ready-to-use foods do not have to be mixed with water and are microbiologically safe to enable outpatient use.
- Micronutrient powders (such as multiple micronutrient powder, multiple micronutrients, and micronutrient sprinkles) which are tasteless powders that come in individual sachets containing the recommended daily intake of 16 vitamins and minerals for one person. The powders can be sprinkled into home-prepared food after cooking or just before eating.
- High-energy biscuits are wheat-based biscuits that are easy to distribute and can improve the level of nutrition in the first days of an emergency when cooking facilities are scarce.

Supplementary feeding

A direct transfer of food to target households or individuals, most commonly PLW and children. The food may be prepared and eaten onsite or given as a dry ration to take home. Supplementary feeding is often provided as an incentive for participation in public services such as primary health care and education.

Undernourishment

When a person's usual daily food consumption, expressed in terms of dietary energy (kcal), is below the energy requirement norm. An undernourished person is not able to acquire enough food to meet the daily minimum dietary energy requirements.

ANNEX 3. References

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