
THE BEST START

SAVING CHILDREN'S LIVES IN THEIR FIRST THOUSAND DAYS





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Cover photo
Jon Warren / World Vision

In Tiraque ADP, Bolivia,
600 women belong to
women's associations.
This group is meeting to
discuss nutrition for children
and pregnant mothers.

ACRONYMS

BFCI	Baby-Friendly Community Initiative
CIDA	Canadian International Development Agency
CMAM	Community Management of Acute Malnutrition
CVA	Citizen Voice and Action
DFID	United Kingdom Department for International Development
ENHANCE	Expanding, Nutrition and Health Achievements through Necessary Commodities and Education Programme (World Vision)
HIRD	High Impact Rapid Delivery programme (Ghana)
IYCF	Infant and Young Child Feeding
MDGs	Millennium Development Goals
MICAH	Micronutrient and Health Programme (World Vision)
MoH	Ministry of Health
NCOE	Nutrition Centre of Expertise (World Vision International)
NFNCO	National Food and Nutrition Council (Bolivia)
NGO	Non-governmental organisation
NWG	Nutrition Working Group (Cambodia)
PD Hearth	Positive Deviance Hearth
SUN	Scaling Up Nutrition movement
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
ZM	Zero Malnutrition Programme (Bolivia)
WHO	World Health Organization

EXECUTIVE SUMMARY

When the United Nations declares a famine and the media transmits haunting photos of starving children with distended bellies, the world snaps to attention. Thousands die, donor nations and agencies rush emergency food aid to the affected areas and, after a while, the immediate crisis recedes from public attention. But the primary causes of the tragedy remain.

So it is with the latest official famine in Somalia and the deteriorating food situation in the Horn of Africa, with more than 12 million of its inhabitants at risk of starvation or severe malnutrition. Many already suffer greatly the ravages of hunger and malnutrition. Indeed, it is this widespread but largely invisible malnutrition that continues to kill millions of children, long after a famine passes. And yet preventing undernutrition is much more effective than recuperating already undernourished children.¹

The lack of a proper diet is the underlying cause of death for some three million children annually. Tragically, the weakened immune systems of these babies and young children put them at much greater risk of developing preventable illnesses like pneumonia and diarrhoea, from which they then have less strength to recover.

In the developing world, more than 7,500 children under the age of five die every day as a result of undernutrition. That is a death toll of more than five every minute. Put another way, this death rate is equivalent to eight buses, fully loaded with children, crashing each hour of the day—and killing all aboard. No society would tolerate such hourly horrors, yet few have effectively grappled with eradicating this scourge.

In 2000, world leaders established eight Millennium Development Goals to be achieved by 2015. One of them is to reduce child mortality rates by two-thirds. While considerable progress has been made to achieve this goal, efforts need to be stepped up substantially to reach it in the next three years. But it can be done.

Indeed, it *must* be done, unless we consider it acceptable to abandon the world's youngest and most vulnerable. Addressing and overcoming malnutrition is a fairly straightforward, relatively inexpensive process—medical breakthroughs are not required. The world knows what works, and this report describes several World Vision programmes that have proven results.

For any nutrition programme, education is a critical first step, especially for mothers, other caregivers and community health workers. Too many are unaware that babies up to six months old require nothing more than breast milk. Providing even a simple extra such as water is not only unnecessary, but can be harmful. Mother's milk contains all the nutrients a growing child needs in these first six months to develop mentally and physically. Nothing better illustrates the point than the unnecessary and preventable deaths of some one million babies annually because they are not exclusively breastfed.

more than
7500
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undernutrition

After six months, however, babies require a variety of complementary foods, as well as nutritional supplements such as vitamin A and zinc, if these are not part of their normal diet. Vitamin A deficiency can cause blindness and kills almost 500,000 children under the age of five annually. As food prices soar around the world, providing children with a healthy diet with the proper nutrients becomes even more problematic, especially for poor parents. Yet, vitamin A can be provided to 80 per cent of children in developing nations for only about \$1.20 per child per year. Such a measure could reduce related mortality rates by about one-quarter, saving over 100,000 children's lives.

Even better results can be achieved with zinc supplements. Some 1.5 million children in the developing world die annually from diarrhoea. Ensuring that children receive zinc supplementation when they have diarrhoea could reduce deaths from diarrhoea by almost 25 per cent, about 350,000 lives saved.

If malnutrition does not lead to a child's death, it still takes a heavy toll. Globally, 195 million children under five are "stunted"—chronically short in height for their age and so underdeveloped physically that they are prone to serious health and developmental consequences. Another 26 million are severely "wasted"—so thin for their height that they are at a much greater risk to their health, including death from disease. Stunted children are unable to grow up to participate to their full potential within their families, communities and countries.

The first 1,000 days, through pregnancy to age two, truly determines the course of a child's life. Without the right food and nutrients during this critical growth period, vital functions are affected. The brain does not develop fully, motor and cognitive development is compromised, as are physical growth and the ability to stave off or fight potentially deadly childhood illnesses. A child weakened by undernutrition often dies from the simplest, preventable and easy-to-treat causes, such as diarrhoea and pneumonia.

The opposite also holds true. Providing proper nutrition in the first 1,000 days ensures children born in the most marginal communities have a chance to develop to their fullest potential. With our knowledge and resources, we face a clear choice: we can be the generation that knew exactly how to end these unnecessary deaths but decided not to, or we can take responsibility for the horrific consequences and act.

Good nutrition benefits more than the child. Children who enjoy a proper diet place fewer demands on their health-care system. They can focus on their education, learn valuable skills and later contribute more to their community's economic growth. One study suggests that improved nutrition in developing nations can boost a country's economic productivity by as much as three per cent.²

In 2008, the highly regarded British medical journal *The Lancet* outlined a compendium of proven nutrition interventions, including micronutrient

ensuring that
children receive
zinc supplements
could save
350 000
lives a year

supplementation, promotion of breastfeeding and nutrition education. In the same year, a group of respected international economists named five nutrition interventions among the top 10 most cost-effective actions for tackling humanity's biggest problems. Based on this cost-benefit analysis for the Copenhagen Consensus Centre think tank, providing vitamin A and zinc supplements was number one.

What is urgently needed to turn this wealth of knowledge into action is political will and increased resources. Leadership must come from all levels of society, not just government. Only an integrated effort can win the war against malnutrition. Nutrition is not just a problem for politicians and health-care systems. Agricultural and educational policies, among others, must be part of any successful national nutrition plan.

Ultimately, good nutrition is delivered in the home, so any national policy must be transmitted effectively through several government levels, regional and local, to support families and reach those in need. Both a country's health and political systems need strengthening to ensure nutrition interventions reach the most vulnerable children in the poorest communities.

This report draws on positive experiences in World Vision programmes and beyond to demonstrate how positive nutrition outcomes for mothers and children can be delivered at the community level. All these programmes are proven and cost-effective, and save lives. In one community in Ghana, for example, an initiative promoting exclusive breastfeeding increased the proportion of mothers who followed this approach from a little more than half to nearly two-thirds.

Or consider a rural area of India where an education programme for community volunteers boosted vitamin A coverage for young children from three per cent to 100 per cent. Meanwhile, an awareness project for mothers and caregivers in Mali resulted in the percentage of normal weight children increasing from 59 to 84. These programmes cost just a few dollars per child.

To achieve the Millennium Development Goal of substantially reducing child mortality rates, World Vision calls on all stakeholders to endorse, implement and take accountability for eight vital recommendations that will save lives.

a child's
first 1000
days
determine
the course
of his/her life

1. Unite behind the common goal

All stakeholders—including governments, donors, non-governmental organisations and the private sector—must align their funding and efforts to end the needless deaths of society’s most helpless for lack of a proper diet, enough food and the right care.

2. Demonstrate strong and sustained leadership

Nutrition leadership must come from all levels—heads of state, community leaders, church leaders, health workers and families. Leadership comes from people declaring that they will no longer tolerate children anywhere, but especially in their own country, dying unnecessarily because they are undernourished.

3. Implement multi-sectoral plans and policies

Governments must develop realistic national nutrition policies with broad action plans to address the root causes of undernutrition. Based on input from all stakeholders, the war on undernutrition must include the costing of direct and indirect nutrition interventions and outline the responsibilities of each sector for delivering improved nutrition for children. Such plans must be monitored and assessed regularly against their targets. And each sector must be held accountable for its contribution to saving children’s lives.

4. Establish or strengthen multi-stakeholder platforms for co-ordination at national, district and local levels

Nutrition programmes should bring together representatives from health, education, agriculture, finance and other relevant sectors, as well as civil society, to plan, implement and monitor nutrition activities on a regular basis. To succeed, implementation must take place at all levels of society, from the national through to the local, where families struggle daily to survive.

5. Ensure targeted resources

Governments must establish a nutrition-specific budget line and increase domestic expenditure for nutrition in line with the estimated expenditure required, identified in their national nutrition plan. Donors should increase their support for nutrition in line with a “fair share” amount of the required US\$11.8 billion estimated annual need and insist on mechanisms that ensure the money is spent for its intended purpose—preventing and treating undernutrition.

6. Strengthen health systems

Priority nutrition interventions to save the lives of infants and allow young children to develop fully should feature prominently in all health-sector policies. As well, we need to strengthen existing health systems, including training frontline health workers whose clear priority is preventing and treating undernutrition. Policies,

which also include incentives and motivation, for community health workers or other volunteers must be developed and reviewed to ensure a standardised approach that reaches all families and communities.

7. Strengthen information systems

Governments should strengthen health information management systems from the local to the national level to ensure regular monitoring of health and nutrition programmes, including resources allocated, to allow greater analysis of results and accountability. Donors should provide increased technical and financial support to build the capacity of information systems.

8. Put citizens first

Public accountability mechanisms should be established that include regular reviews of progress toward improving nutrition levels. These systems should include all stakeholders and be based on data from surveys and health facilities, as well as information ranging from the community level through the participation of citizen groups and civil society organisations.

Today, there exists a unique historical opportunity to engage in a refocused and determined effort that could all but eliminate malnutrition. Sadly, the horrors of Somalia have drawn attention, once again, to the widespread plight of undernourished children. At the same time, there is a growing awareness among the political elites that more action is urgently required to address this unnecessary and easily eradicated killer of the world’s most defenceless people; babies and young children. Everyone, including those in government in the developing world and among donor nations, agrees—malnutrition should be consigned to the history books.

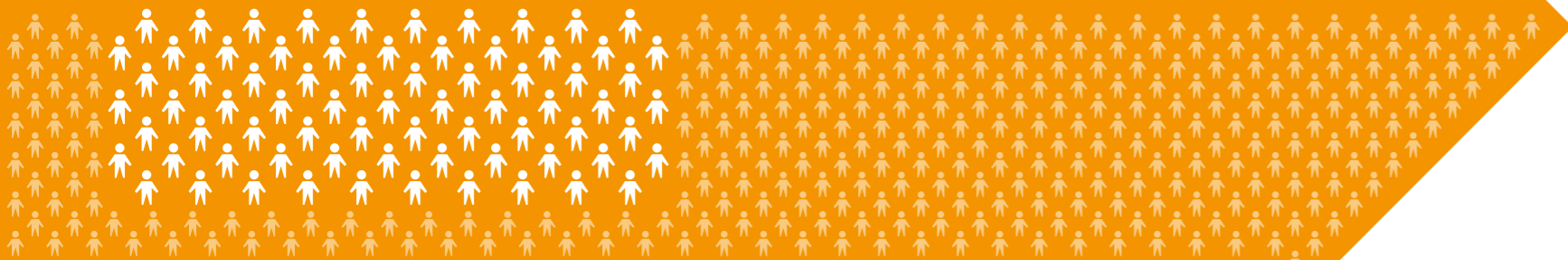
The solutions are known and the road map to implement them exists. Whether this opportunity will be fully grasped depends upon the extent the global, regional and national nutrition architecture can adapt. The world’s leaders, political and otherwise, must not only exercise will, but must accept their political and moral responsibility to provide the sustained focus, action and resources needed to turn the tide against undernutrition.

It is possible to fill the current nutrition gap between delivery systems and families. We can bridge the chasm between the interventions, systems and pledges on one hand and those who most need our help, on the other: the families plagued by generation after generation of undernutrition. The challenge lies, therefore, not in the question of what to do, but in how to connect health systems, funding and support with the most vulnerable families to ensure that these solutions are both accessible and accessed.

NUTRITION: SCALING IT UP

Each year 2.8 million children under 5 die from undernutrition. Scaling up spending on simple proven nutrition interventions can help stop this.

If we spent US\$ 11.8 billion a year we could **SAVE 1.1 MILLION CHILDREN'S LIVES & PREVENT STUNTING IN 150 MILLION CHILDREN**



= 15 000 children

We could also improve the nutrition of billions

- 34 MILLION** CHILDREN GET MULTIPLE MICRONUTRIENT POWDERS
- 40 MILLION** WOMEN GET IRON FOLIC ACID SUPPLEMENTS
- 72 MILLION** CHILDREN GET COMPLIMENTARY FOOD
- 103 MILLION** CHILDREN GET VITAMIN A SUPPLEMENTS
- 319 MILLION** CHILDREN GET THERAPEUTIC ZINC
- 1.2 BILLION** PEOPLE GET IODISED SALT
- 2.8 BILLION** PEOPLE GET IRON FORTIFICATION OF STAPLE FOODS

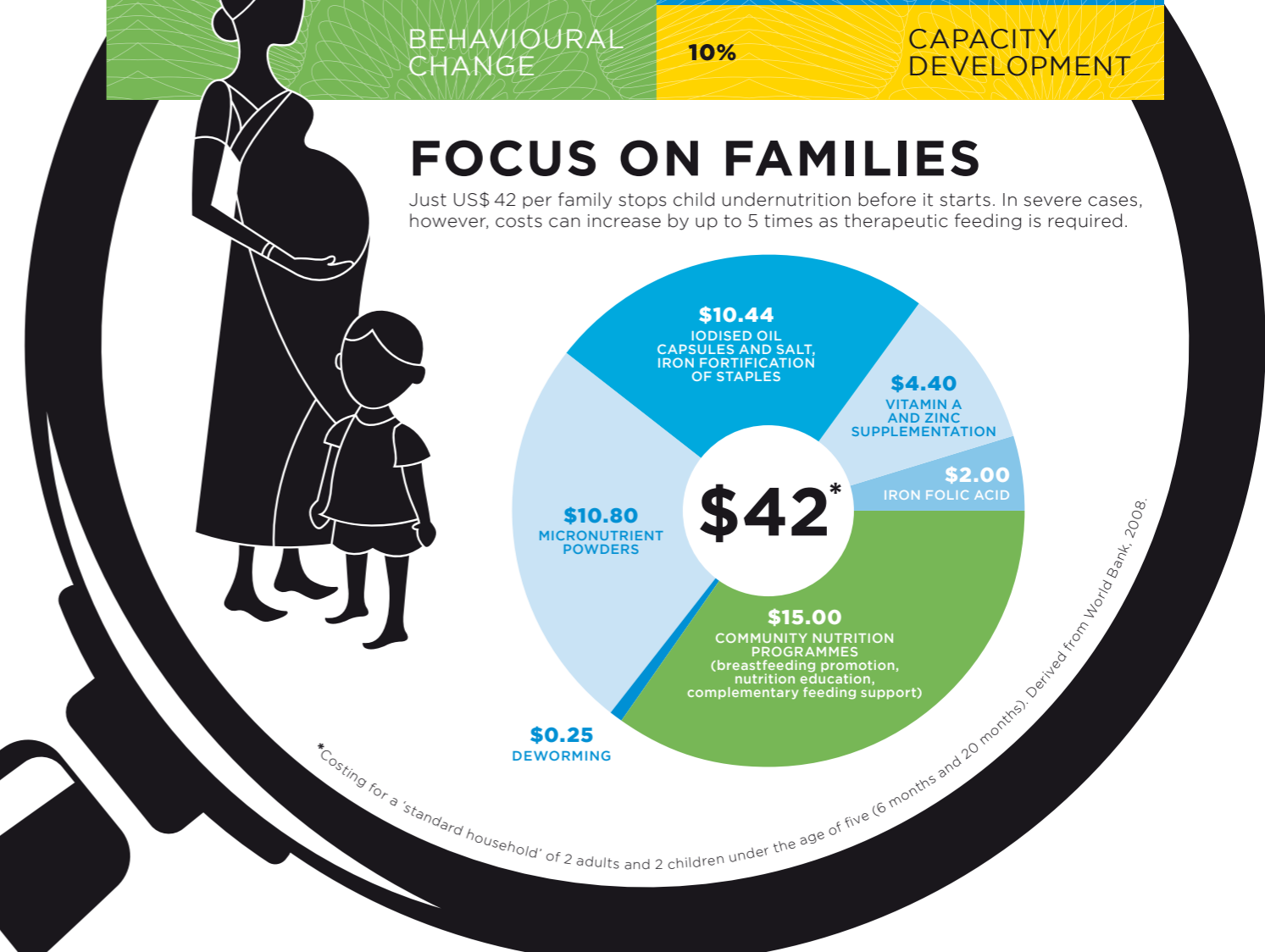
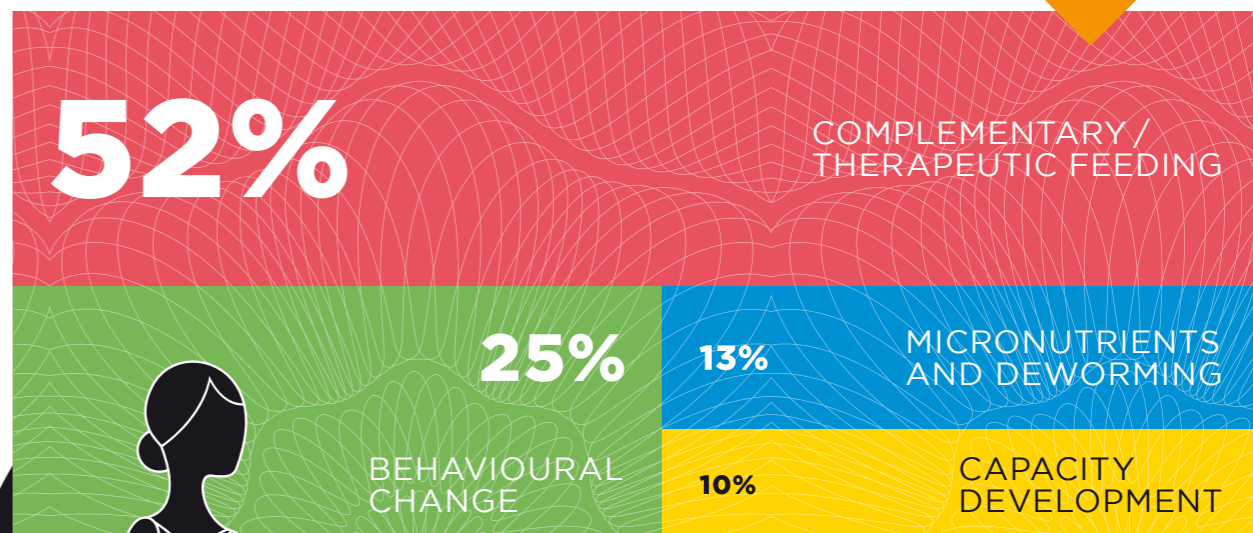
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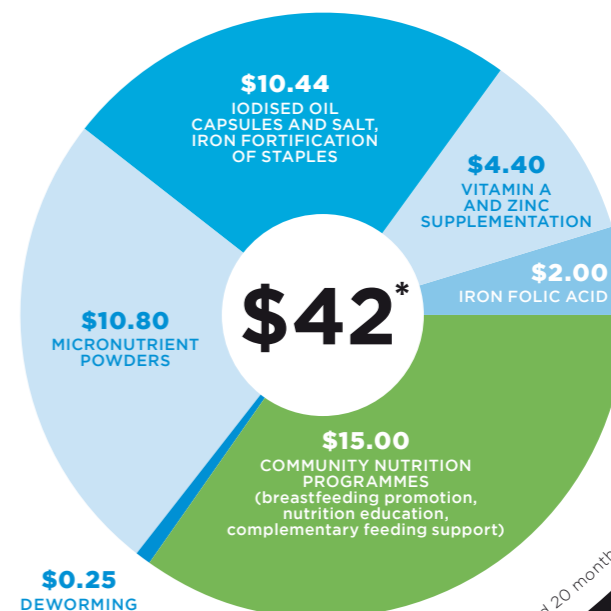
RICH COUNTRIES' CURRENT SPEND OF US\$ 171 MILLION SAVES JUST 15 000 CHILDREN

US\$ 11.8 BILLION WOULD BE SPENT ON



FOCUS ON FAMILIES

Just US\$ 42 per family stops child undernutrition before it starts. In severe cases, however, costs can increase by up to 5 times as therapeutic feeding is required.



*Costing for a 'standard household' of 2 adults and 2 children under the age of five (6 months and 20 months). Derived from World Bank, 2008.

Women make up just over half the world's population but **over 60% of the world's hungry people**

Investing in nutrition can increase national GDP by **2-3%**

Almost **3 million preventable child deaths** each year are related to undernutrition

5 of the top 10 most cost-effective solutions for development focus on improving nutrition

Less than 40% of babies in the developing world are **exclusively breastfed**

In all regions of the world, **children living in rural areas and children in the poorest 20% of households** are more likely to be stunted

The same **5 countries represent** over half the world's stunted and underweight children: **India, China, Nigeria, Pakistan and Bangladesh**

1 in 3 children in the **developing world** is stunted

Children born in the **poorest households in Africa and Asia** are **twice as likely to be underweight at birth** than those born in the richest households

The return on investments for **nutrition** can be as high as **39:1**

In India over 36 million children live in the poorest 20% of the population... **this is the most of any country and accounts for 18% of the global stunting burden**

A nutrition package that would reach **90%** of stunted children in the **36 highest burden countries** will cost **\$11.8 bn**

That's less than the **\$13.6 bn** that **U.S. consumers** spend on potato and tortilla chips each year

1 million babies' lives could be saved if all mothers were encouraged and supported to **exclusively breastfeed for the first 6 months of life**

In Peru, children in the poorest households are **11 times more likely to be stunted** than those in the richest households... **stunted children in rural areas** outnumber those in urban areas by **more than 3 to 1**

SCALE OF THE PROBLEM



Tim Freccia, Kenya / World Vision

NUMBERS

Every year, nearly three million children die and the lives of millions more are irreversibly altered as a result of undernutrition.

Malnutrition and disease interact in a destructive cycle, increasing vulnerability, and reducing appetite and the ability to absorb crucial nutrients. An estimated 195 million children under five around the world are “stunted” (chronically short for their age and otherwise underdeveloped physically) and another 26 million are severely “wasted” (chronically thin for one’s height and at much greater risk of death).³ While these numbers are slowly improving, progress is slower in the world’s worst affected regions and among the poorest populations in every country, in part due to the relatively little attention given to nutrition in the national and international arenas.

The limited progress in reducing the number of underweight children worldwide is exacerbated by the recent economic crisis, the continuing food price crisis and the growing effects of climate change. In the developing world, children in the poorest households and those in rural areas have seen the least progress.

Only one-third of children under six months of age in developing countries are exclusively breastfed.⁴ That means two-thirds are not, and are missing out on a vital source of essential nutrition in the critical early stages of life. Suboptimal breastfeeding is responsible for an estimated one million child deaths each year.⁵ Vitamin A deficiency kills nearly 500,000 children annually, and zinc deficiency claims the lives of another 350,000, almost all from treatable diarrhoea.⁶ Meanwhile, iron-deficiency anaemia during pregnancy is an underlying cause in one-fifth of maternal deaths each year.⁷

The effects of undernutrition are intergenerational. In addition to leading to low birth weight, which contributes to 60 per cent of neonatal deaths,⁸ maternal undernutrition is also implicated in an estimated 20 per cent of maternal deaths.⁹

In fact, malnutrition is one of the world’s most serious health problems and the greatest underlying cause of child mortality.¹⁰ And yet, good nutrition provides one of the first and best chances for child survival and development throughout life.

We now know that proper nutrition during a child’s first 1,000 days, through pregnancy to two years of age, supports healthy brain development, normal motor and cognitive development, physical growth, and the ability to stave off or fight deadly childhood illness and immediate threats to life during and after childbirth.

These positive outcomes are critical not only to children and their families, but to the countries where they live. Proper nutrition reduces the burden on health-care systems, increases school attendance and performance, allows citizens to reach their full potential and contributes to economic prosperity.

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Nutrition is so critical to human well-being that investing in good infant and child nutrition can lead to an estimated two to three per cent growth in the economic wealth of developing countries.¹¹

The numbers tell the tale, or the tragedy. As it stands today, we are failing miserably to provide hundreds of millions of children with the nutrition necessary for healthy life, growth and development.

UNDERNUTRITION: WHAT IT LOOKS LIKE

Stunting/Chronic malnutrition

Stunting, defined as low height for age, is caused by insufficient nutrition to support the rapid growth of a child in utero and during the first two years after birth. Factors such as maternal anaemia, tobacco use during pregnancy and indoor air pollution can also contribute to poor foetal growth and stunting. Stunting is generally irreversible and is linked with delayed motor development, less schooling, diminished intellectual functioning, reduced earnings and lower birth weights of children born to women who themselves were stunted in childhood.¹²

Wasting/Acute malnutrition

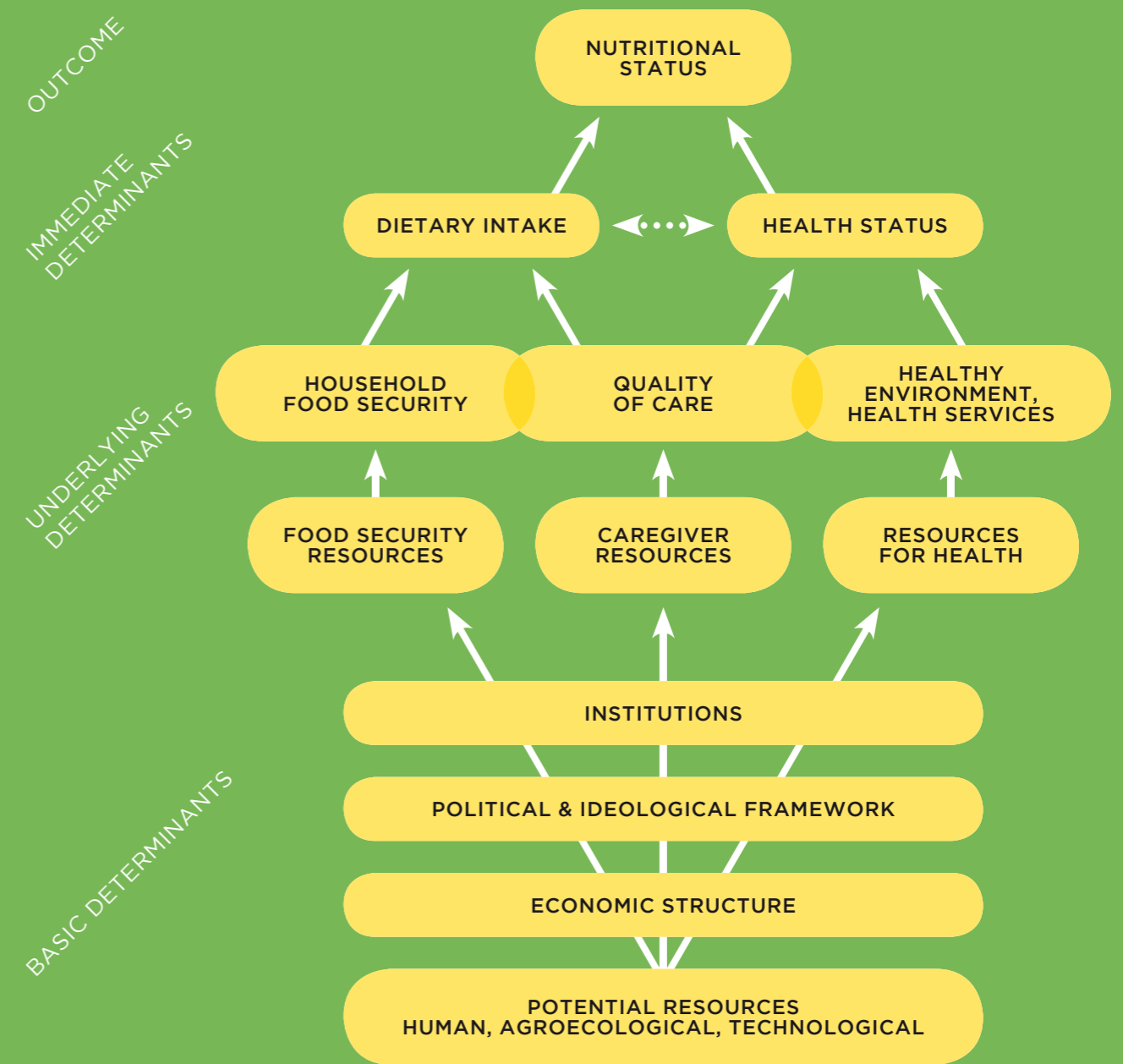
Wasting, measured by low weight for height, is usually a result of recent very low food intake and is often compounded by disease. Children who are suffering from moderate and severe acute malnutrition require urgent treatment in order to prevent death. When compared with well-nourished children, severely malnourished children are five to 20 times more likely to die.¹³

Micronutrient deficiencies

Micronutrient-deficient children lack the essential vitamins and minerals needed for healthy growth and development, and to survive disease. Micronutrient deficiencies are often not visibly evident, but their effects are significant. Deficiencies in such micronutrients as iodine, iron, vitamin A and zinc negatively impact brain development, cognitive and motor abilities, as well as physical productivity and the body's ability to fight illness.

FOUNDATIONS OF GOOD NUTRITION

An understanding of the foundations for nutrition is critical for success. Good nutrition is built on the right inputs at the household level – food, care and health – and influenced by income, education and wider social and political structures.



UNICEF'S NUTRITION FRAMEWORK

SOURCES
Adapted from UNICEF 1990; Jonsson 1993; and Smith and Haddad 2000

WE KNOW THE ANSWERS



Undernutrition is not an inevitable fact of life. We know what to do to improve nutrition in families, communities and countries. The evidence is in, it has been tested and it is known to work to save children's lives. Proven, cost-effective ways to tackle undernutrition through specific interventions (Table 1), when scaled up, will have a dramatic impact.

For example, in clinical trials, vitamin A supplementation alone reduced the risk of mortality among children aged six to 59 months by an average of 24 per cent.¹⁴ Including zinc supplementation as a part of diarrhoea management can prevent 25 per cent of persistent diarrhoea cases among children in the same age bracket.¹⁵ With optimal infant feeding practices, up to 19 per cent of deaths among children under five could be averted.¹⁶

These interventions are effective in reducing deaths and improving quality of life, but they are also smart economic investments for governments. In 2008, when a panel of the world's leading economists—The Copenhagen Consensus—ranked the most cost-effective actions for tackling humanity's biggest problems, nutrition interventions filled five of the top 10 spots. For example, every dollar spent on vitamin A and zinc supplementation alone would generate benefits of more than \$17.¹⁷

KNOWLEDGE

Proper nutrition starts with knowledge. In countries around the globe, babies are born to parents who do not receive counselling about the value of exclusive breastfeeding or how to properly grow or purchase and prepare nutritious complementary foods to introduce to children after six months. The families of most of these children lack the knowledge of and the means to act on that information. Once children are old enough to have a variety of nutritious foods introduced into their diets, parents may not have the land or income, or even the awareness, to feed their children life-nourishing and life-saving nutritious food from animal sources, crops, or vitamin supplements offered through their country's health systems, such as vitamin A and zinc.

ACCESS

Where nutrition is concerned, two access issues are compounded. First, up to 80 per cent of children in the developing world do not access health services or nutrition education and provision beyond what is available in their own communities. This

means that unless health services extend to communities and households, even the limited nutrition education currently built into the health system will not reach the families that need it the most.

Second, families cannot act upon what they learn about nutritious foods for their children if they do not have the means to buy or grow enough of that food. Worldwide, nearly one billion people are food insecure, meaning they do not have access to a steady supply of nutritious food. With food prices once again on the rise it is crucial to help families provide enough healthy food for their growing children.*

If families are to be empowered to address their own nutritional needs, nutritious food, critical nutrition-related services and interventions must be accessible in communities and homes.

CO-ORDINATED APPROACH

Many contextual factors that affect nutrition at the community level fall outside the realm of health policy and need to be addressed in planning and implementing relevant nutrition policies. Female literacy rates, income levels, nutritious food crops and community-level organisational structures all impact the capacity of families, communities and health systems to ensure adequate nutrition.

To date, areas like agriculture, social welfare and education, which have the potential to improve nutrition, have not mobilised their resources in a co-ordinated way, and in some cases are not directly working to improve nutrition at all. Business as usual is not going to lead to the kind of progress that millions of children are starving to see.

In addition to implementing nutrition-specific interventions, countries must also facilitate nutrition-sensitive development to ensure that improvements in family nutrition are supported by the entire social system. Health-sector activities such as deworming and vaccination are important for nutrition because a healthy body absorbs nutrients much more efficiently than an unhealthy one.

Meanwhile, the agricultural sector has an important role to play in improving the nutrient content of staple crops such as rice, beans, maize and sweet potato through traditional plant breeding, and educating farmers and consumers. Social protection programmes can encourage healthy eating by linking conditional cash transfers to family nutrition and helping families to afford nutritious food. And the education sector has a significant role to play in teaching children and their families and communities about good nutrition and the means for achieving it.

proper
nutrition
starts with
knowledge

* Many families in developing countries spend up to 80 per cent of their income on food. As prices continue to rise higher than in 2007 and 2008, children feel the impact first when poor households are forced to eat cheaper, often less-nutritious foods, while cutting back on non-food expenditures like school and health care.

COSTS

In 2009, the World Bank estimated that it would cost US\$11.8 billion annually to implement 13 evidence-based direct interventions for children under the age of two in the 36 countries that account for 90 per cent of undernourished children.¹⁸

While the World Bank has estimated how much is required to mount a serious attack on undernutrition, no one really knows what is actually now being spent on nutrition since few donors and national governments have a separate budget line for this activity. Attempts to track nutrition resources from donors by the Lancet and Médecins Sans Frontières have produced estimates of between US\$250 million and US\$350 million annually—woefully short of the identified need. Even when taking into account what developing-country governments are likely to spend on nutrition from domestic resources, there is an urgent need for additional funding.








This dramatic shortfall is recognised by major donors. That same year, the UK Department for International Development stated that “Despite the seriousness of the problems associated with maternal and child undernutrition, the amount of nutrition-related aid provided to the 20 countries with 80 per cent of globally stunted children is a small sliver of the total aid provided to these nations.”¹⁹

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PREVENTING MATERNAL AND CHILD UNDERNUTRITION

Proven interventions delivered at the right time form World Vision's health and nutrition strategy.

PREGNANT WOMEN: 7 CORE INTERVENTIONS

-  Adequate diet - extra meal & nutritious snack
-  Healthy timing and spacing of birth
-  Iron / Folate supplements
-  Deworming
-  Tetanus toxoid immunisation
-  Malaria prevention and intermittent preventive treatment
-  Facilitate access to maternal health service: antenatal and postnatal care, skilled birth attendance, prevention of mother-to-child transmission, HIV / STI screening

CHILDREN UNDER TWO: 11 CORE INTERVENTIONS

-  Appropriate breastfeeding
-  Oral rehydration therapy / zinc
-  Essential newborn care
-  Care-seeking for fever
-  Hand-washing
-  Full immunisation for age
-  Appropriate complementary feeding (6 to 24 months)
-  Malaria prevention
-  Adequate iron
-  Deworming (+12 months)
-  Vitamin A supplementation

-9 MONTHS

0

3

6

9

12

15

18

21

24

ONE EXTRA MEAL & ONE NUTRITIOUS SNACK



EXCLUSIVE BREASTFEEDING



IRON/FOLATE SUPPLEMENTATION



DEWORMING



CONTINUED BREASTFEEDING



1ST VITAMIN A



MEASLES IMMUNISATION



1ST DEWORMING, 2ND VITAMIN A



2ND DEWORMING, 3RD VITAMIN A



2 - 3 FEEDINGS / DAY OF COMPLEMENTARY FOOD



3 - 4 FEEDINGS / DAY OF COMPLEMENTARY FOOD



GIVE ORS WITH ZINC FOR DIARRHOEA



ENSURE ADEQUATE IRON INTAKE DAILY FROM 6 - 24 MONTHS



WORKING TOGETHER



Simon Peter Esaku, Uganda / World Vision

Despite the continuously high numbers of children suffering from undernutrition around the world, an unprecedented opportunity exists today to turn the corner.

A growing body of research and experience is guiding the way, and momentum is building. There are now major catalytic initiatives to promote nutrition-focused alliances, seek appropriate and increasing funding streams and lead co-ordinated efforts to address undernutrition worldwide.

The challenge is being taken up by national governments, donor governments, international agencies, UN bodies, civil society, academics and the private sector alike as these diverse actors come together to scale-up nutrition programmes and improve outcomes among particularly vulnerable populations: pregnant women and children under the age of two.

The Scaling Up Nutrition (SUN) movement involves more than 100 bodies and organisations dedicated to keeping nutrition high on national and international agendas; it is also dedicated to supporting the implementation of evidence-based interventions to improve maternal and child nutrition.²⁰ As a collective effort, SUN is unprecedented in terms of global commitment and concerted focus on enabling concrete action. It clearly places ownership of nutrition in national hands, but aims to galvanise all the supporting action from development partners required for countries to achieve success. This and other initiatives call for increased investment in nutrition, joint action by a broad range of stakeholders and a greater evidence base for action, monitoring and evaluation through data collection and the sharing of experience.

As momentum builds and opportunity for change beckons, one simple fact must guide all discussion and action: nutrition is first and foremost the domain of families. The ultimate goal of nutrition programmes must be improved nutritional outcomes for children. Even as efforts proceed to include nutrition in health strategies, even as policies are developed at the national level, even as supply chains are addressed and human resource capacity is increased—nutrition among families will not improve unless these efforts focus on spanning the gap between nutrition health care and delivery systems on the one hand and the families they are meant to serve on the other.

Families must have the knowledge and capacity to provide for themselves and to access critical services and interventions that support adequate nutritional intake. Indeed, any effort that does not focus on the intersection between systems and families is bound to fall short.

Fortunately, as momentum at the national and international levels increases, so does the experience of community-focused action to inspire and guide the scaling up of nutrition-specific initiatives and nutrition-sensitive development overall. National leaders are hearing about the successful rollout of programmes

bridge
the gap
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to serve

at the community level and are ensuring resources flow for nutrition interventions. Multi-sectoral collaboration is extending downward to district and local levels. Policy and guidance are being clarified and technical support provided by non-governmental organisations (NGOs). Lessons are being learned and shared in relation to nutrition packages, capacity building, and monitoring and evaluation. And communities are being empowered to have a voice.

With its combined community-national and global-level vision, World Vision is well placed to help ensure that action on nutrition connects health systems with communities. World Vision's approach includes a strong focus on primary health, nutrition education and behavioural change at the household level by empowering caregivers and children to keep themselves healthy. World Vision's efforts also include improving access to sufficient high-quality foods (through animals and gardens, for example) and improving the quality of existing foods (such as fortification).

At the same time, World Vision's strategies build the capacity of community groups to address and monitor local causes of illness, death and malnutrition, advocate for quality health-service delivery and monitor home-based care services. Reaching up from its roots in community action, World Vision is well experienced in partnership with national governments and other stakeholders, such as the private sector, to ensure that quality health and nutrition services reach the families that need them.



communities
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VOICE

FAMILIES AT THE CENTRE



Michelle Siu, Cambodia / World Vision

In order for families to be empowered to address their own nutritional needs, critical nutrition-related services and interventions must be accessible at the community level. This means that community-level delivery, access and, most importantly, uptake must be at the very heart of national policies and strategies. Isolated communities, in particular, warrant special and priority attention, since the families in these communities are the most vulnerable and stand to benefit the most from improved nutrition.

Governments and their partners in nutrition must embark on nutrition policies with a focus on community uptake of services. In this way, local priorities such as networks of trained community-based workers, strong referral systems and access to facility-level services will provide direction for nutrition strategies, instead of being relegated to the bottom of action plans.

The resulting locally based approaches contribute to the empowerment of communities, improved efficiency, sustainability of interventions and strengthened civil society capacity, along with improved local governance. To be effective, the objectives of such programming need to be specific, based on an analysis of the root causes of undernutrition and prioritised according to context-specific needs. In some locations, adequate service provision may well be a key objective, while community skills development to encourage health-seeking behaviour might be a priority in a different area.

Successful community-based nutrition initiatives are being implemented to address challenges such as managing acute and chronic undernutrition as well as micronutrient deficiencies, reducing the number of low-birth-weight babies, and providing nutrition and health education to promote health-seeking behaviour.

BABY-FRIENDLY COMMUNITY INITIATIVE (CAMBODIA)

One example of a proven community-based initiative is the Baby-Friendly Community Initiative (BFCI) in Cambodia. The BFCI targets improvements in exclusive breastfeeding coverage and appropriate complementary feeding alongside disease-prevention activities.

Since the Cambodian Ministry of Health formally launched the initiative in 50 villages in 2004, the BFCI has expanded considerably. Today, it covers 2,675 villages, 20 per cent of all Cambodian villages. It operates in conjunction with the Baby-Friendly Hospital Initiative and an aggressive public television and radio campaign on breastfeeding. As a result, exclusive breastfeeding for the first six months has increased from 11 per cent of mothers in 2000 to 60 per cent in 2005

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per cent

and to 74 per cent in 2010.²¹ This remarkable achievement is largely due to the comprehensive nature of integrated and targeted programming at the community level, with support from all levels of government.

The BFCI features the formation of mother-to-mother support groups and regular child-friendly clinics for children under the age of five, with decentralised supervision of the initiative by local health workers. Comprehensive legislation, policies and strategies at the national level provide a crucial shared framework for action. The initiative is being implemented as a complementary activity alongside the essential package of maternal and newborn care within Cambodia's national health strategy²² that has, since 2000, seen significant increases in levels of ante-natal care and the delivery of babies by skilled attendants at health facilities.²³ Baby-Friendly Community Initiatives have also been successful in raising levels of exclusive breastfeeding in other countries, such as Gambia.²⁴

MICRONUTRIENT AND HEALTH PROGRAMME (AFRICA)

World Vision's Micronutrient and Health Programme (MICAH), funded by the Canadian International Development Agency, undertook a series of successful nutrition initiatives at the national and local levels in five countries (Ghana, Tanzania, Malawi, Ethiopia and Senegal) between 1996 and 2005. Community-based interventions were designed to complement national policies and programmes based on both high-quality national data and the insight of local communities. The collaboration with local communities ensured that key decisions regarding process were appropriate, increasing the effectiveness of programme implementation. Key to the design and implementation process were women's groups, men's groups, children's groups, village committees (which managed iodised salt testing and protection of water sources) and village chiefs.

MICAH's objectives were to build local capacity in communities to increase micronutrient intake through supplementation, encourage families to modify dietary behaviour, strengthen parents' capacity to provide nutritious food for their children and to reduce the incidence of diseases that affect micronutrient status. This approach significantly decreased the number of cases of malnutrition among children under five years of age in all five countries, including an average decrease in stunting from 45 to 31 per cent.²⁵

**build
local
capacity
in communities**

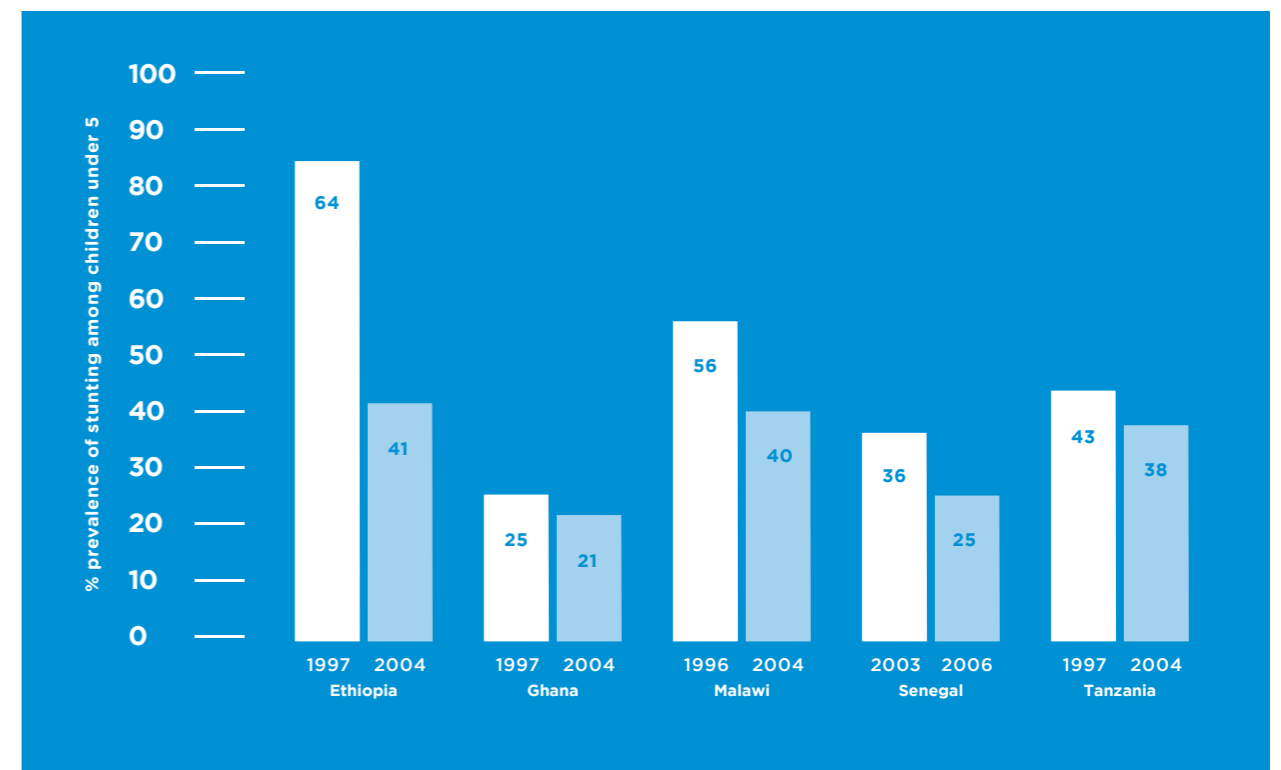


Figure 2 MICAH demonstrated decreases in stunting rates in children under 5 across communities in 5 countries

RIGHT LEADERS, RIGHT PLANS

Progress in improving nutrition outcomes requires leadership at every level of government, from civil society and from private sector champions—influential people who can place and keep nutrition high on everyone's agenda. Such strength in depth of governance and leadership is vital to ensure sustained commitment to the resourcing, implementation and scale-up of nutrition interventions.

Nutrition leaders—whether from government, UN agencies, national civil society, academic research institutes, international NGOs or community organisations—should come not only from within the nutrition sector, but from related fields that can implement nutrition-sensitive measures. At the district or community level, health committees made up of local leaders from various backgrounds have an important role to play in creating demand for nutrition services and ensuring that the right of access to these services is fulfilled.

Policies should ensure that programmes and services target the poorest populations. Guidance materials to implement such policies must be available to frontline service providers. Those policies and guidelines that have been developed with input from all key nutrition stakeholders, as in the case of a national nutrition working group or council, are more likely to be utilised successfully and applied more rigorously.

Data-based decision making for nutrition is critical,²⁶ and should include not only coverage and process indicators, but also in-depth causal analysis to provide important information about the scale and the roots of undernutrition by examining livelihoods, food security and care practices, as well as health and sanitation conditions primarily at the district, community and household levels.

Strong technical support from international stakeholders can be greatly beneficial in the development of nutrition policy. In Mozambique, Ghana and Kenya, for example, national policies have been or are being developed in a process that leverages the technical resources of stakeholders such as USAID, the World Bank, UNICEF and World Vision. International NGOs offer a unique benefit by merging global expertise and sub-national analysis that capitalises and expands upon successes of community-level interventions. For example, through the Ghanaian Nutrition Technical Working Group, World Vision's successful experience in administering zinc with oral rehydration solution to treat diarrhoea has led to this intervention being included in Ghana's essential basic health-care package.

MALAWI

Malawi has provided important lessons in nutrition leadership from its president, Ministry of Health, district health authorities and international NGOs. Dedicated nutrition posts within the ministerial cabinet have enabled nutrition interventions to be prioritised within national plans. District health authorities have led the

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way in piloting programmes such as WHO's Community Management of Acute Malnutrition (CMAM) programme, now a widely accepted approach to tackle severe malnutrition.

Meanwhile, World Vision's MICAHA programme funded a National Micronutrient Coordinator from 1996 to 2004 in the Ministry of Health to co-ordinate nutrition efforts among three ministries (Health, Agriculture and Women's Services). This position played a pivotal role in providing leadership for the rollout and success of interventions, targeting iron-deficiency anaemia in particular. Through this dedicated position, World Vision broadened participation in training and planning discussions, bringing to national forums valuable community-level experience of high-impact interventions and multi-sectoral approaches. The policies developed in these consultations continue to have a positive impact in Malawi years later.

CAMBODIA

The Cambodian government has also provided important leadership examples in its National Nutrition Programme and associated Nutrition Working Group, which include a wide variety of stakeholders. The collective influence of these programmes and bodies has led to comprehensive nutrition policies and strategies. Further, nutrition-dedicated indicators have been included within the country's Poverty Reduction Strategy Paper, placing nutrition on the national development agenda for the first time.

Cambodia's comprehensive approach to nutrition ranges from legislation on the marketing of breast milk substitutes to the establishment of mother-to-mother support groups. Multiple NGO partners operate at district and community levels to provide nutrition programmes, including training, support and guidance for frontline health workers in line with government policies and strategies. This government leadership has contributed to significant improvements in exclusive breastfeeding rates and vitamin A supplementation, as confirmed by three successive national surveys in 2000, 2005 and 2010. The rates of exclusive breastfeeding for children up to five months of age increased from 11 per cent in 2000 to 60 per cent in 2005 and 74 per cent in 2010. Vitamin A coverage increased from 29 per cent to 71 per cent over the same period.²⁷

GHANA

Ghana's experience provides a clear example of momentum being created from effective top-down nutrition leadership that is informed by local-level success. In recent years, Ghana has experienced a significant rise in exclusive breastfeeding thanks to a national campaign that extends to the community level. Exclusive breastfeeding for children under the age of six months reached 63 per cent in 2008,

compared with 53 per cent in 2003 and only 35 per cent for children under four months in 1998.²⁸ Building upon the evidence of community-level outcomes, the Ghanaian minister of health advocated for and successfully gained government commitment in 2010 for Ghana to be an "early riser" country in the global Scaling Up Nutrition movement. This process will lead to deliberate strengthening of policy, planning, management and accountability mechanisms prior to scaling up levels of service provision. As a result, the Ghanaian Technical Working Group, co-chaired by UNICEF and the Ministry of Health, has been reinvigorated.

BOLIVIA

Leadership is also responsible for strong nutrition programming in Bolivia, where presidential commitment, decentralised delivery and timely reviews have led to impressive results across the country. Before 2005, little progress had been made on undernutrition, and one-quarter of children under the age of five remained stunted—a figure that was three times higher in the rural areas.²⁹ In 2006, Bolivia's National Development Plan 2006–2010 placed nutrition objectives and activities high on the agenda. Important political leadership came through the National Food and Nutrition Council (NFNCO), which is co-chaired by the president and the minister of health and sports. The NFNCO has been instrumental in implementing the Zero Malnutrition Programme (ZM) and establishing crucial legislation on breast milk substitutes.

Key to this success has been the decentralisation of the NFNCO to the municipal level. This has allowed the ZM to be inserted into the structure of the health service, supported by civil society networks and volunteer groups. The NFNCO also evaluated operational weaknesses in a mid-term review and identified the need to strengthen local sensitivity and training on undernutrition. A strategy of information, education and training, as well as an awareness campaign, was subsequently put in place.

As a result, by March 2010, 75 per cent of children aged six to 11 months received vitamin A supplementation, helping to reduce the incidence of measles, blindness and death. More importantly, the percentage of children's deaths due to severe malnutrition was reduced from nine per cent in 2008 to seven per cent just one year later.³⁰

MONGOLIA

Crucial to the successful scale-up of the World Vision Mongolia Nutrition Programme from the community to the national level were provincial and local working groups that involved government leaders from *somons* (districts) and *bags* (rural communities) along with representatives of the national Ministry

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in a year

of Health. The programme targeted the inclusion of the micronutrient powder Sprinkles in an integrated nutrition approach. It started with a pilot in 2000, scaling up to cover all of Selenge province in 2005. The programme then expanded to the national level in 2009.

Through the provincial working groups, government leaders organised annual competitions between towns and sub-districts for best service provision, community participation and improved health and nutrition outcomes. The competitions were extremely successful, due in part to the local working groups that were charged with mobilising communities and recruiting volunteers. At both provincial and local levels, government officials signed performance agreements featuring health and nutrition targets. High-performing communities were given prizes according to their stated needs, such as computers, latrines or motorcycles.³¹ As a result, in Selenge stunting dropped from 16 per cent to six per cent and increasing anaemia rates in children under age two were reversed.³²

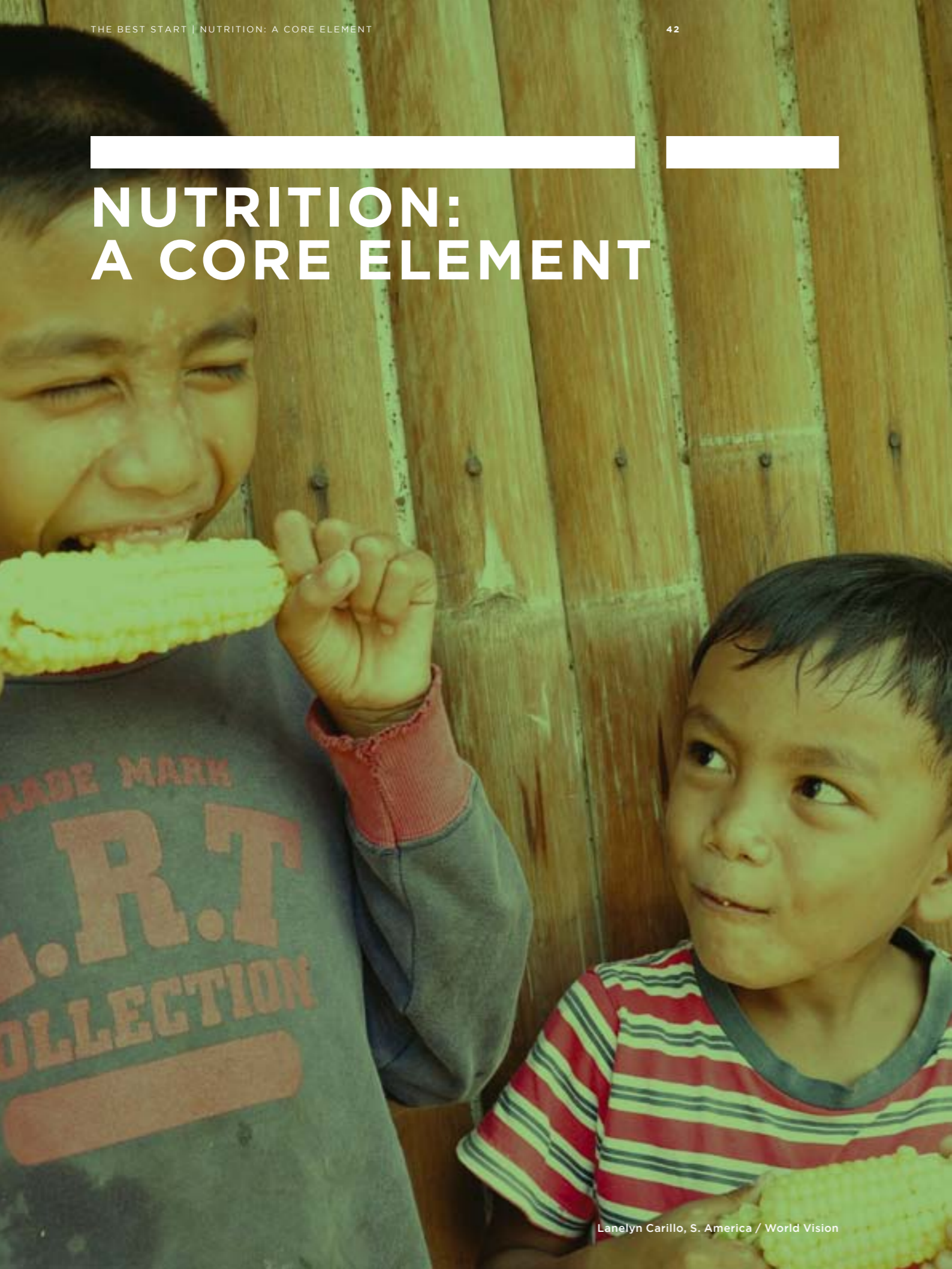
ETHIOPIA

Ethiopian success in the rollout of Community Management of Acute Malnutrition programming has been attributed to multiple stakeholders developing well-articulated policy and national protocols, based on good practices and international NGO implementation experience. The rollout strategy was pragmatic and included the development of national and regional planning and how-to documents. The decentralisation of the guidelines also adapted to each geographical level, therefore making them more accessible and applicable within each delivery area of nutrition and health care.



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in four years

NUTRITION: A CORE ELEMENT



Lanelyn Carillo, S. America / World Vision

Given nutrition's symbiotic relationship with health, agriculture, clean water and sanitation, multi-sectoral forums for planning and co-ordination are crucial for catalysing progress. Furthermore, to be effective, such co-ordination must exist consistently from national department managers to community-level extension workers.

Multiple-sector analysis and planning are required to ensure that nutrition interventions are being considered and incorporated into sectoral activities. However, in many countries, joint efforts at the district level and lower are often much weaker than within national level forums. Where successful national cross-sectoral platforms exist, they should be adapted to regional, district and community levels to leverage the impact of joint nutrition operations.

Given their direct relationships with multiple sectors, civil society and NGOs have a key role to play in promoting this co-ordination among sectors at the sub-national level that will result in greater integration of nutrition aims across the board.

BOLIVIA

A key component of Bolivia's Zero Malnutrition Programme is the multi-sectoral nature of its management structures. The country's National Food and Nutrition Council, led by the president, has representation from all nine ministries and enables nutrition to be considered by the breadth of governmental bodies and incorporated into their activities.

CAMBODIA

Another strong example of multi-sectoral collaboration is the Council for Agricultural and Rural Development in Cambodia. This body boasts representation from a range of ministries, including health, agriculture and planning, as well as the country's Nutrition Working Group (NWG). The NWG's involvement on the council, and the council's considerable influence on decision and policymaking at high government levels have given nutrition a significant national profile. As well, the global initiative called Renewed Efforts Against Child Hunger (REACH) is also active within Cambodia. By deploying a dedicated facilitator, this multi-sectoral co-ordination initiative has seen impressive success in other countries such as Mauritania and Laos by bringing together nutrition-relevant parties to conduct joint planning, implementation and evaluation of interventions.*

* REACH partnerships have seen improved situation analyses and monitoring (integrated nutritional dashboard indicators), action planning and implementation of synergies, significant resource mobilisation, increased collaboration and information-sharing, and greater involvement across sectors and organisations. For more information see <http://www.reach-partnership.org/>.

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WORLD VISION'S ENHANCE, MICAH AND OVATA

At a local level, World Vision's Expanding Nutrition and Health Achievements through Necessary Commodities and Education programme (ENHANCE)** has brought district and extension staff in the agriculture and health sectors together on a regular basis to facilitate information-sharing, and joint analysis and planning in six African countries. ENHANCE identifies food-insecure households with children under five and pregnant women, and helps distribute poultry, micronutrient-rich vegetable seeds and vitamin-rich *moringa* seedlings to them. As well, ENHANCE promotes education on the nutritional value of these resources, how to care for them and how to prepare food with them. A subsequent study of consumption among Ghanaian children in target communities 12 months to 23 months of age showed a 10 per cent increase in consumption of animal-source foods and a 33 per cent increase in vitamin A intake.³³

Meanwhile, World Vision's Micronutrient and Health Programme (MICAH) provides lessons in the benefits of broadly based, integrated efforts to address malnutrition. In Malawi, for example, positive nutrition outcomes occurred thanks to the involvement of the agriculture and food security sectors promoting crop diversity and planting micronutrient-rich crops. Also, including the veterinary medicine sector in the programme enhanced the availability of small animals for consumption, while the education sector boosted nutrition knowledge and the value of hygiene and health messages in school-aged children. Furthermore, involving the water and sanitation sectors improved sanitation facilities and behavioural changes for improved hygiene. MICAH Malawi also collaborated with national-level academic institutions to ensure that results were well documented and shared to inform planning.

World Vision carried out its OVATA project, funded by the US Agency for International Development, in Mozambique. The programme aimed to bring agriculture and nutrition activities together, focusing on a particular crop: the orange-fleshed sweet potato. At the community level, two agriculture extension agents and two nutrition extension agents per intervention district jointly planned and carried out education sessions to combined farmers and women's groups. In a staged approach over two years, agriculture extension agents focused on production, commercialisation and storage techniques, while nutrition extension agents offered sessions on various nutrition and health topics, including the signs, causes and consequences of malnutrition, the importance of a varied diet, breastfeeding and food recipes using orange-fleshed sweet potato. Visual aids, songs, games and role-playing were used during the presentations, as well as during home visits, which

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were conducted routinely in participating households. Importantly, a broader series of radio broadcasts, community theatre and themed clothing targeted communities with messages relating to both nutrition and agriculture. As a result, children in the intervention areas had more diverse diets, seven times higher vitamin A intake and 14 per cent higher energy intake than in control areas, and vitamin A deficiency reduced from 60 per cent to 36 per cent in the two-year period.³⁴

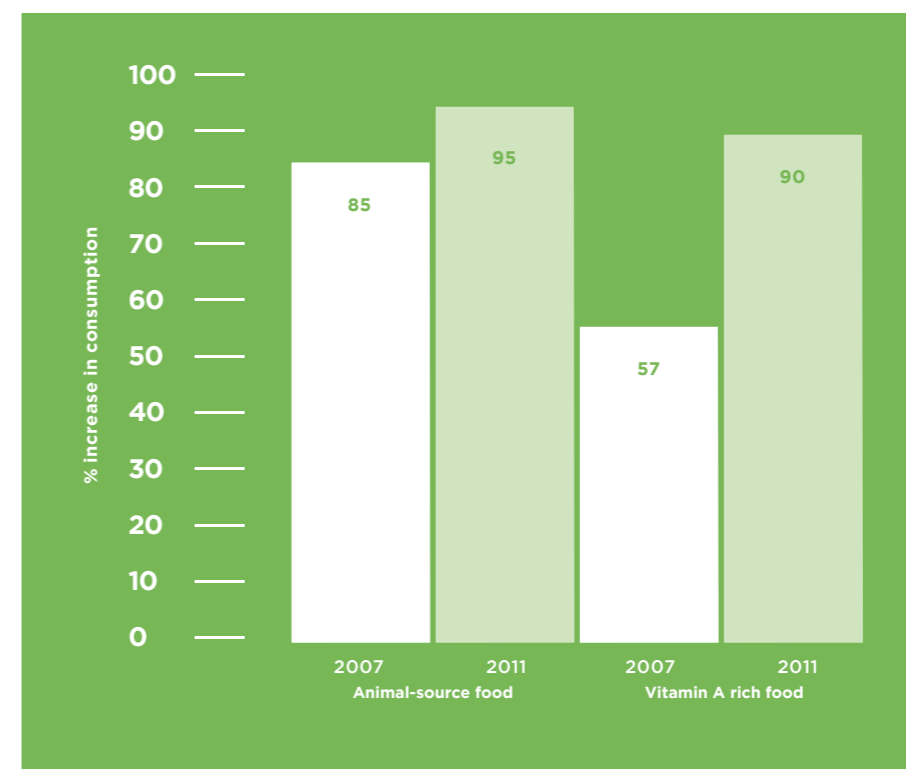


Figure 3 ENHANCE Ghana results show increases in animal-source consumption and vitamin A intake among children 12 to 23 months of age

** ENHANCE operated in six countries from 2007 to 2010: Cambodia, Kenya, Tanzania, Ghana, Malawi and Mozambique.

BOOSTING THE HEALTH SYSTEM



Health systems are the primary channel for implementing direct nutrition interventions. Functional health-service delivery systems are required to ensure that nutrition services reach target populations. However, it cannot be assumed that a strong health system will automatically improve nutrition outcomes. Nutrition priorities must be well represented within the health system and adequately resourced to be implemented effectively. This includes direct budget lines for a comprehensive nutrition package and activities.

Many countries currently lack the capacity to track accurately health expenditures. Nutrition expenditures are even more elusive, whether in the health sector or in other ministry budgets such as agriculture or education.

Given that the vast majority of families, especially the poorest and most vulnerable, access health and nutrition care in their communities, health systems—and their nutrition programmes—must be able to deliver at the local level. This means decentralising elements such as technical training, supported human resources, monitoring and evaluation. Ghana and Ethiopia are two examples of countries seeing improvements in health due to their investment in community health workers as part of their health systems.

At the district and community levels in particular, key aspects of health-system strengthening include human resource development, nutrition training of health practitioners and extension workers, improving nutrition and health-monitoring systems, ensuring adequate provision of medical equipment and supplies, and empowering communities to engage in their health systems.

As families become more responsible for their health, healthy behaviour is enhanced. When community mechanisms that advocate for accessible and quality health services are bolstered, citizens help break down demand-side barriers to access.

Furthermore, health systems must demonstrate strong accountability, both in terms of results and effectively using resources. Strong health management information systems are needed to provide clear data on nutrition outcomes and not just the outputs of the health system's activities. This accountability is closely linked to strong governance and leadership on nutrition and will facilitate an increase of dedicated funding streams from institutional and international donors.

NUTRITION PACKAGES

Comprehensive nutrition packages may differ slightly from one region of a country to another in order to address different causes of undernutrition and socio-demographic variables. It should be noted that such causal analysis at the

Ghana and Ethiopia are seeing **improvements in health** due to their **investment in community health workers**

sub-national level can be time-consuming and expensive, so it must be adequately resourced and accorded appropriate importance to be able to guide alterations to existing interventions. With dedicated resources, nutrition programmes are more successful than if such programmes are dependent on primary health-care package budgeting and management lines.

GHANA

In Ghana, the High Impact Rapid Delivery (HIRD) programme, launched in 2005, includes interventions to improve breastfeeding coverage, vitamin A intake, and infant and young-child feeding practices. Dedicated budget lines and materials that empower health practitioners and managers to channel and adapt the nutrition packages to local contexts have been instrumental in contributing to improved rates of exclusive breastfeeding.³⁵ HIRD is building upon increases in government spending on health and nutrition packages—nearly 15 per cent of its GDP in 2009, including dedicated funding for HIRD activities. These funds have been invaluable to keep district-level health and nutrition-delivery systems running.³⁶

Likewise, the success of World Vision’s MICAH programme in addressing micronutrient deficiencies in five African countries is attributable, in part, to significant national support for comprehensive and integrated packages of nutrition interventions.³⁷

CAMBODIA

Packages of support that provide multiple interventions allow numerous nutritional challenges to be addressed at once. But the scope of such multiple-intervention-based programmes, such as Cambodia’s Infant and Young Child Feeding programme, makes them more difficult to sustain when compared with single-target interventions such as vitamin A supplementation. One of the difficulties is maintaining sufficient human and institutional resources to manage, review and implement the programmes across government ministries. The experience gained through past management models should be leveraged to guide new multiple-intervention programmes.

NUTRITION-SEEKING BEHAVIOUR

Comprehensive nutrition packages include not only direct interventions, but also nutrition education and behaviour-change communication. If the knowledge, attitude and practice of individuals are not changed to promote good health and

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health-seeking behaviour, the impact of other interventions will be reduced, and nutrition gains will lack sustainability.

INDIA

Demonstrated successful behavioural-change approaches in regard to nutrition include “timed and targeted counselling,” developed as a primary component of World Vision’s USAID-funded Pragati Child Survival Project in India, now also being implemented in Ethiopia, South Sudan, Mozambique and Afghanistan. Addressing health and nutrition in an integrated manner along the continuum from pregnancy to age two is a key programme strength.

In India, as well, community volunteers in the Lalitpur project area of Uttar Pradesh identified women in early pregnancy, and over a series of scheduled visits delivered key nutrition messages, complete with pictures and demonstrations. The timed and targeted-counselling approach successfully increased exclusive breastfeeding from 23 per cent to 28 per cent, increasing timely initiation of semi-solid foods from 15 per cent to 66 per cent and boosting vitamin A coverage of children aged 12 to 23 months from three per cent to 100 per cent.³⁸

POSITIVE DEVIANCE HEARTH

Positive Deviance Hearth is an intensive behaviour-change programme that uses the “positive deviance” approach. This involves identifying positive behaviours practised by the mothers or caretakers of well-nourished children from poor families and seeking to transfer these practices to others in the community with poorly nourished children. The programme’s three-dimensional approach works to reduce the prevalence of malnutrition among children under five years of age, build local capacity to sustain the rehabilitation of children and prevent future malnutrition among all children in the community.* World Vision is implementing PD Hearth in more than 20 countries.

This involvement of community volunteers, including fathers, adolescents and grandmothers, working alongside primary caregivers, is crucial to achieving results. Impacts of PD Hearth from World Vision programmes include an increase in the percentage of normal-weight children from 59 per cent to 84 per cent in Mali and a sustained decrease in the percentage of malnourished children from 43 per cent to 31 per cent in Nicaragua.

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* For more information on PD Hearth: CORE Group, Positive Deviance/Hearth: *A resource guide for sustainable rehabilitating malnourished children.* (Washington, D.C.: CORE Group, 2003).

ENOUGH PEOPLE TO GET THE JOB DONE

The backbone of nutrition services is a cadre of motivated and adequately resourced technical experts and frontline health workers from the national to the community level.

In any health-system analysis that aims to lead to improvements in nutrition services, one of the most critical components is a comprehensive situational analysis of human resources—both numbers of individuals and their nutrition knowledge and experience. It is also important to evaluate training initiatives from Ministry of Health training units, as well as academic institutes and NGOs in order to understand available opportunities for capacity building.

Ensuring dedicated training plans for each level of technical expertise is critical in developing human resources with the necessary knowledge and skills to deliver national nutrition plans. Cambodia's Minimum Package of Activities in-service training curriculum is such an example. The programme has been widely rolled out since 2004, and two-thirds of Cambodian health centres with a total of 2,500 staff have received the appropriate training.

It is also clear that as initiatives shift toward increased community-based treatment, greater attention will need to be paid to ensuring sufficient knowledge and ability of volunteer community-based health actors to supervise and refer cases of undernutrition from the community and village levels. World Vision in particular offers a wide range of nutrition training programmes for community health workers and volunteers, among others.

While debates continue about how to motivate community-based health staff and volunteers and around the role of incentive packages, context-specific solutions are required immediately to ensure that frontline health workers are adequately motivated and resourced.

In Ghana, World Vision and other NGOs have long been testing a variety of support packages for volunteers. Community health volunteers in World Vision's ENHANCE programme were supported in their roles by being provided rucksacks containing nutrition and health education materials, first-aid equipment, monitoring forms and long-lasting insecticide-treated bed nets. Subsequent discussions have taken place at the national level regarding incentives for community workers in the form of subsidised health insurance.

Ethiopia is known globally for its Health Extension Programme, which includes a cadre of paid community health workers called Health Extension Workers. In Cambodia, Village Health Support Groups comprise two volunteer health workers, elected by their communities and provided with financial incentives for undertaking

greater attention is needed to ensure sufficient knowledge and ability of volunteer community-based health actors

a variety of nutrition and health activities. Decisions about the level, type and methods of incentives and motivation require national leadership and co-ordination to facilitate the implementation of a standardised approach.

SUPERVISING FRONTLINE HEALTH WORKERS

A crucial aspect of delivering nutrition services is supervising the quality of care throughout the health system. Technical and managerial weaknesses are most likely to be found within the middle management tier, as national and district or primary health-care levels are often afforded greater attention and resources than provincial or regional levels. The consequences are weakened awareness of policy developments, reduced levels of supervision, fewer refresher and technical skills training, limited analysis of caseload and morbidity patterns, delayed and lower-quality reporting, and poor performance management.

INDIA

Programmes like World Vision's Pragati Child Survival Project in India prioritise adequate supervision at all levels to ensure progress against targets. The programme's focus on timed and targeted counselling saw improved nutrition practices around breastfeeding, complementary food provision and vitamin A intake. Frontline success was achieved through support for a cadre of community-based service providers/implementers who were adequately prepared for their given tasks with five days of training. To execute their tasks, they were equipped with tools and methods such as registers and utilisation protocols, counselling plans, job aids and handbooks. Project staff and supervisors conducted regular routine field-monitoring visits and supervisory checklists, and reports were shared with the workers to ensure their ownership of results.

Excessive workload can further burden managers as they attempt to adequately supervise programmes. Involving experienced NGOs in training and supervision is one way to help address the challenge. But, ultimately, government planning and adequate budgets are the only way to ensure sustainability in this area.

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MEASURING WHAT WORKS

Concerted monitoring and evaluation of nutrition programmes are critical, but are often under-resourced. Increasing momentum to improve accountability in health systems provides an important opportunity to include appropriate and clearly identified nutrition indicators at all levels of data collection and analysis. The technical and operational support for this, including the need for targeted supervision, needs to be considered during planning.

Currently, national governments are highly dependent on data from Demographic Health Surveys and Multiple Indicator Cluster Surveys, but these are completed only every three to eight years and are not always integrated with a country's facility and administrative data, where such data exists. Greater investment in one reliable system, such as a health management information system that enables more regular monitoring of programmes, particularly at the community and district levels, is needed.³⁹

A health management information system should be clearly aligned to national nutrition policies or strategies. Through the formation of alliances and co-ordinated leadership of the nutrition sector, key nutrition impact indicators such as wasting and stunting have been incorporated into national health plans in Ghana, Cambodia and Ethiopia. However, most actors acknowledge that additional nutrition indicators concerning coverage and intermediate outcomes would be beneficial in measuring progress in areas such as micronutrient health, as well as infant and young-child feeding practices.

NGOs can share experience and expertise in evaluating community-level indicators. World Vision's ENHANCE and MICAH programmes have incorporated community-level monitoring support and have examined new indicators and processes that could be incorporated in some form.

Strengthening monitoring requires that health practitioners be empowered to share their findings and be heard. Mechanisms for sharing information and engaging in policy processes must be established. It is important that planning meetings, involving health staff from all levels of the system, provide meaningful opportunities for feedback on programmes based on implementation experience.

For example, through MICAH, World Vision collected data on a monthly basis at the project level, analysed it and shared it with partners within the community, with NGOs and with government on a quarterly basis. Each quarter, progress was reviewed against targets and plans of action were modified as needed. At the national level, the monitoring data was aggregated, reviewed and analysed semi-annually.

For its own Community Management of Acute Malnutrition programming, World Vision rigorously tracks each child's progress against an international set of

monitoring indicators. Summary data from all project sites is collected in an online database, which provides data aggregation and analysis through summary statistics, charts and graphs. The data can be aggregated from projects to district, national and international levels. In this way, aggregated data for any time period can be accessed, not only by project site managers, but also by their supervisors, as well as by national, regional and international staff. Regular review of programme results increases the accountability and thus the programme performance.

World Vision and many other actors are exploring the use of mobile devices and information technology to improve the accuracy and timeliness of data collection and analysis ("mhealth" and "ehealth").⁴⁰ Operational research on the efficiencies and results of such undertakings will be crucial to document improved processes and outcomes of integrated efforts to address undernutrition.

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WE ARE ALL ACCOUNTABLE



PEOPLE POWER, BREAKING BARRIERS

Civil society has a key role to play in holding governments accountable to its citizens by supporting demands for equitable access to health and nutrition services. Typically, communities are often sidelined in the planning and monitoring of services or policies, and few resources are devoted to addressing demand-side barriers such as the impact user fees has on the low take-up of services. But when people speak up and demand better services, improvements can be seen. More people start to use these services, leading to healthier, better-nourished families.⁴¹

World Vision's Citizen Voice and Action (CVA) approach is an example of a participatory tool that empowers local communities to evaluate and demand increased accountability for public services, including health. Since 2005, World Vision Brazil has used CVA as an effective instrument of citizen influence on the public health system. In the slums of Fortaleza in northeastern Brazil, 200 community members came together to closely examine their local health services, followed by planning and advocacy that resulted in the funding of a new health centre and the reform of another. Their effort also influenced local government health planning, budgeting and monitoring. The group is now an official part of the city's Municipal Health Council, contributing to health policies and implementation.

In Kenya, World Vision is employing this empowerment model to build the capacity of community groups to dialogue with district, regional and national governments on issues of monitoring, transparency and accountability in the health sector. This has led to collaborative submissions in a number of districts as part of the national budgetary process.

The voices of citizens and local NGOs are amplified when those voices speak in unison to achieve a common goal of influencing nutrition policy and programmes. MEDICAM in Cambodia, for one, is an example of a membership organisation of health-related NGOs that provides a strong collective voice for the sector and a bridge between the sector and government. MEDICAM facilitates regular knowledge-sharing meetings, enabling improved access to health and nutrition policies, joint advocacy, training sessions and co-ordinated input into the development of government guidelines and assessments.

Thanks to its high profile and wide representation at the national and sub-national levels, MEDICAM has been able to effectively influence government policy. For example, the organisation's NGO Child Survival Working Group in Cambodia played an important role in the development of that country's Child Survival Strategy.⁴² MEDICAM's co-ordination role extends beyond Cambodia as it represents member NGOs in regional and global health networks and processes.

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In 2010, it was appointed to the World Bank's Health Nutrition Civil Society Consultative Group, alongside other national and international civil society organisations and networks.

Meanwhile, the Scaling Up Nutrition movement provides a rallying point for citizens and civil society organisations to hold all stakeholders to account for their commitments—primarily developing-country governments, donors and multilateral agencies. Civil society groups are operational or forming under the Scaling Up Nutrition banner in a number of high-burden nutrition countries, seeking to engage in the national multi-stakeholder platforms being established and represent the interests and rights of citizens with a united voice.

Accountability for health and nutrition is also a growing area of focus for developing-country governments, donors and civil society through the momentum created by the UN Secretary General's Global Strategy for Women's and Children's Health. Launched in September 2010, this strategy has generated pledges of financial and policy commitments from a wide range of stakeholders totalling an estimated US\$40 billion. Although the focus is women's and children's health and nutrition, it is not yet clear how much of the \$40 billion pledged is aimed at nutrition in particular. As more details of these commitments become clearer, it is vital that civil society seeks to hold donors and developing-country governments accountable for pledges made, especially those pertaining to nutrition.

The recommendations from a related commission set up by WHO to develop an accountability action plan for the UN Global Strategy include a national accountability mechanism for women's and children's health that would carry out an annual review of progress, as well as strengthen the capacity of national health management information systems. In any event, civil society groups focusing on women's and children's health must co-ordinate better with those focusing on nutrition to ensure that efforts to improve accountability for health specifically include nutrition.

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CONCLUSION AND RECOMMENDATIONS



Addressing child undernutrition is an urgent challenge. We have the means and the knowledge to make the necessary changes. World Vision calls on all stakeholders to support the implementation of the following eight critical reforms that will contribute significantly to improving nutrition and saving children's lives.

RECOMMENDATIONS

1. Unite behind the common goal

All stakeholders—including donors, NGOs and the private sector—must align their funding and efforts to end the needless deaths of society's most helpless for lack of a proper diet, enough food and the right care.

2. Demonstrate strong and sustained leadership

Nutrition leadership must come from all levels—heads of state, community leaders, church leaders, health workers and families. Leadership comes from people declaring that they will no longer tolerate children anywhere, but especially in their own country, dying unnecessarily because they are undernourished.

3. Implement multi-sectoral plans and policies

Governments must develop realistic national nutrition policies with broad action plans to address the root causes of undernutrition. Based on input from all stakeholders, the war on undernutrition must include the costing of direct and indirect nutrition interventions and outline the responsibilities of each sector for delivering improved nutrition for children. Such plans must be monitored and assessed regularly against their targets. And each sector must be held accountable for its contribution to saving children's lives.

4. Establish or strengthen multi-stakeholder platforms for co-ordination at national, district and local levels

Nutrition programmes should bring together representatives from health, education, agriculture, finance and other relevant sectors, as well as civil society, to plan, implement and monitor nutrition activities on a regular basis. To succeed, implementation must take place at all levels of society, from the national through to the local, where families struggle daily to survive.

5. Ensure targeted resources

Governments must establish a nutrition-specific budget line and increase domestic expenditure for nutrition in line with the estimated expenditure required, identified in their national nutrition plan. Donors should increase their support for nutrition in line with a "fair share" amount of the required US\$11.8 billion estimated annual

need and insist on mechanisms that ensure the money is spent for its intended purpose—preventing and treating undernutrition.

6. Strengthen health systems

Priority nutrition interventions to save the lives of infants and allow young children to develop fully should feature prominently in all health-sector policies. As well, we need to strengthen existing health systems, including training frontline health workers whose clear priority is preventing and treating undernutrition. Policies, which also include incentives and motivation, for community health workers or other volunteers must be developed and reviewed to ensure a standardised approach that reaches all families and communities.

7. Strengthen information systems

Governments should strengthen health information management systems from the local to the national level to ensure regular monitoring of health and nutrition programmes, including resources allocated, to allow greater analysis of results and accountability. Donors should provide increased technical and financial support to build the capacity of information systems.

8. Put citizens first

Public accountability mechanisms should be established that include regular reviews of progress toward improving nutrition levels. These systems should include all stakeholders and be based on data from surveys and health facilities, as well as information ranging from the community level through the participation of citizen groups and civil society organisations.

Today, there exists a unique historical opportunity to engage in a refocused and determined effort that could all but eliminate malnutrition. Sadly, the horrors of Somalia have drawn attention, once again, to the widespread plight of undernourished children. At the same time, there is a growing awareness among the political elites that more action is required to address this unnecessary and easily eradicated killer of the world's most defenceless people: children under the age of five. Everyone, including those in government in the developing world and among donor nations, agrees—malnutrition should be consigned to the history books.

The solutions are known and the road map to implement them exists. Whether this opportunity will be fully grasped depends upon the extent the global, regional and national nutrition architecture can adapt. The world's leaders, political and otherwise, must not only exercise will, but must accept their political and moral responsibility to provide the sustained focus, action and resources needed to turn the tide against undernutrition.

It is possible to fill the current nutrition gap between delivery systems and families. We can bridge the chasm between the interventions, systems and pledges on one hand and those who most need our help, on the other: the families plagued by generation after generation of undernutrition. The challenge lies, therefore, not in the question of what to do, but in how to connect health systems with the most vulnerable families to ensure that these solutions are both accessible and accessed.



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APPENDICES



TABLE 1
**INTERVENTIONS THAT AFFECT MATERNAL AND CHILD
 UNDERNUTRITION – FROM THE LANCET⁴³**

Sufficient evidence for implementation in all 36 countries	Evidence for implementation in specific, situational contexts
Maternal and birth outcomes	
Iron folate supplementation	Maternal supplements of balanced energy and protein
Maternal supplements of multiple micronutrients	Maternal iodine supplements
Maternal iodine through iodisation of salt	Maternal deworming in pregnancy
Maternal calcium supplementation	Intermittent preventive treatment for malaria
Interventions to reduce tobacco consumption or indoor air pollution	Insecticide-treated bednets
Newborn babies	
Promotion of breastfeeding (individual and group counselling)	Neonatal vitamin A supplementation
	Delayed cord clamping
Infants and children	
Promotion of breastfeeding (individual and group counselling)	Conditional cash transfer programmes (with nutritional education)
Behaviour change communication for improved complementary feeding*	
Zinc supplementation	Deworming
Zinc in management of diarrhoea	Iron fortification and supplementation programmes
Vitamin A fortification or supplementation	Insecticide-treated bednets
Universal salt iodisation	
Handwashing or hygiene interventions	
Treatment of severe acute malnutrition	

* Additional food supplements in food-insecure populations

TABLE 2
**PRIORITY NUTRITION INTERVENTIONS, INDICATORS,
 COSTS, AND POTENTIAL OUTCOMES**

Nutrition Intervention	Sector(s) Involved	Proposed Delivery Platform	Target Population	Potential Impact	Approx. cost per beneficiary (US\$)	Measure of economic effectiveness	References
Micronutrients							
1. Vitamin A Supplementation	Health	Child health days	Children 6–59 months of age	<ul style="list-style-type: none"> 24% reduction in mortality 7.2% reduction in deaths before 36 months of age at 99% coverage 55% reduction in persistent diarrhoea 6.9% of DALYs averted at 36 months of age at 99% coverage (including neonatal supplementation) 	1.20/child/year	Benefit:cost ratio at 80% coverage = 17:1 US\$60 per DALY saved	43, 44, 45
			Post-partum women	<ul style="list-style-type: none"> Improved vitamin A content of breastmilk 	0.60/woman/year	Little data available	
2. Deworming	Health Education	Child health days Public school system / Community nutrition programmes	Children 12–59 months of age	<ul style="list-style-type: none"> Improved micronutrient status (1.7 g/L increase in haemoglobin) 0.14 cm increase in height 0.10 kg increase in weight 5–10% reduction in anaemia in populations with high rates of intestinal helminthiasis 	0.25 per round of treatment (i.e. 0.25 or 0.50/child/year)	Benefit:cost ratio = 6:1	43, 45, 52
			School-aged children	<ul style="list-style-type: none"> 35% reduction in proportion of children with anaemia 	0.15 per round of treatment (i.e. 0.15 or 0.30/child/year)	Benefit:cost ratio = 60:1	
			Pregnant women	<ul style="list-style-type: none"> Improved micronutrient status (reduction in haemoglobin between 1st and 3rd trimester was 6.6 g/L smaller) 	0.50/pregnant woman/year	Little data available	
3. Zinc supplementation as a part of diarrhoea management	Health	Child health days / Community nutrition programmes	Children 6–59 months of age	<ul style="list-style-type: none"> 14% fewer episodes of diarrhoea 15% fewer episodes of severe diarrhoea or dysentery 25% fewer episodes of persistent diarrhoea 9% reduced risk of mortality 3.6% reduction in deaths before 36 months of age at 99% coverage 4.2% of DALYs averted at 99% coverage 	1.00/child/year	Benefit:cost ratio at up to 40% coverage = 13.7:1 Approximately US\$73 per DALY gained or \$2,100 per death averted	44, 45
4. Iron-folic acid supplementation	Health	Community nutrition programmes	Pregnant and post-delivery women	<ul style="list-style-type: none"> 12 g/L increase in haemoglobin 73% reduction in the risk of anaemia at term 17% reduction in DALYs attributable to maternal deaths at 90% coverage 	2.00/pregnant woman/year	US\$66–115 per DALY saved	18, 43, 46, 54, 56
			Women of childbearing age	<ul style="list-style-type: none"> 9.6 g/L increase in haemoglobin levels 13% reduction in the prevalence of iron deficiency 	0.76/woman/year (personal communication)	Little data available	
			Children 6–59 months of age	<ul style="list-style-type: none"> 7.4 g/L increase in haemoglobin 38–62% reduction in the prevalence of anaemia Improved mental development 	0.40–1.50/child/year	Little data available	
5. Multiple micronutrient powders for home fortification	Health	Community nutrition programmes	Children 6–24 months of age	<ul style="list-style-type: none"> 5.68 g/L increase in haemoglobin 46% reduction in the risk of anaemia 	1.80/child 6–11 months/year 3.60/child 12–23 months/year	Benefit:cost ratio= 37:1 US\$12.20/DALY saved US\$406/DALY saved	18, 43, 47

Nutrition Intervention	Sector(s) Involved	Proposed Delivery Platform	Target Population	Potential Impact	Approx. cost per beneficiary (US\$)	Measure of economic effectiveness	References
6. Universal salt iodisation and iodine fortification of water in high-risk areas	Private Sector Trade	Market-based delivery	General population	<ul style="list-style-type: none"> 41% reduction in prevalence of goitre 17.7% reduction in DALYs at 90% coverage Average IQ is 13 points higher in communities where iodine intake is sufficient vs. iodine-deficient communities 	0.05/person/year	Benefit:cost ratio = 30:1	18, 43, 48
7. Micronutrient fortification of staple and/or complementary foods	Private Sector Trade	Market-based delivery	General population	<ul style="list-style-type: none"> 5.7 g/L increase in haemoglobin among women of child-bearing age 6.9 g/L increase in haemoglobin among pregnant women 3.4 g/L increase in haemoglobin among children Iron fortification reduces the risk of child anaemia by 28% 7% reduction in DALYs at 90% coverage 	0.20/person/year for large-scale fortification 0.84-1.00/person/year for small-scale fortification	Benefit:cost ratio = 8:1 US\$22-60 per DALY saved	43, 49, 52, 54, 55
Behaviour Change							
8. Breastfeeding promotion and support	Health	Community nutrition programmes	Children under 2 years of age	<ul style="list-style-type: none"> Proper infant feeding practices can prevent 19% of all under 5 deaths Infants who are breastfed are 6 times more likely to survive in the early months, 6 times less likely to die from diarrhoea in the first 6 months, and 2.4 times less likely to die from acute respiratory infections in the first 6 months 	15.00/household for a community nutrition programme which would include these activities	The cost per DALY saved for community nutrition programmes for behaviour change ranges between US\$53-153	16, 18, 52
9. Growth monitoring and dietary counselling about appropriate complementary feeding practices and locally-available, nutrient-dense foods	Health / Agriculture	Community nutrition programmes	Children under 5 years of age	<ul style="list-style-type: none"> 1.5% reduction in deaths before 36 months at 99% coverage 0.25 increase in height-for-age Z score 15% reduction in the prevalence of stunting at 36 months of age 2.1% of DALYs averted at 99% coverage 			18, 43
10. Promotion of proper handwashing practices	Health / Water and Sanitation	Community nutrition programmes	General population	<ul style="list-style-type: none"> 30% reduction in the incidence of diarrhoea 32% reduction in severe diarrhoea and dysentery 			16, 18, 51
Food Security and Dietary Diversity							
11. Increased availability and access to a stable and diverse range of nutritious food sources throughout the year in the household through: <ul style="list-style-type: none"> Increasing the number of farm families with diversified food sources Increasing the number of families growing micronutrient-rich crops Increasing the number of farm families rearing small livestock for own household use Increasing the amount of revolving funds for the rearing of small animals Increasing post-harvest management techniques for high nutrient-dense food sources 	Food Security / Agriculture	Community nutrition programmes / Agricultural extension systems	Households with children under 5 years of age	<ul style="list-style-type: none"> 5 g/L increase in haemoglobin 0.12 umol/L increase in serum retinol 2-year intervention in Mozambique involving the introduction of orange-flesh sweet potato into household gardens increased serum retinol levels in children by 0.100 umol/L 	0.14/person/year	Little data available	53, 54
Treatment of Severe Acute Malnutrition							
12. Treatment of severe acute malnutrition using a community-based management approach	Health	Community nutrition programmes & primary health care system	Children 6-59 months of age	55% reduction in mortality	200/child/episode	US\$41 per DALY saved	18, 43, 50

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World Vision is a Christian relief, development and advocacy organisation dedicated to working with children, families and communities to overcome poverty and injustice. We are a federal partnership and work in almost 100 countries worldwide, serving more than 100 million people.