

# ACUTE MALNUTRITION: AN EVERYDAY EMERGENCY

A 10-POINT PLAN  
FOR TACKLING  
ACUTE MALNUTRITION  
IN UNDER-FIVES





**A MOTHER WEIGHS  
HER CHILD AT THE  
MEDICAL CLINIC IN  
CHANIKA, TANZANIA.**

Courtesy of Daniel Hayduk/RESULTS UK.

# CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>5</b>
<b>INTRODUCTION</b>	<b>8</b>
● The Generation Nutrition campaign	9
<b>PART 1: THE PROBLEM EXPLAINED</b>	<b>10</b>
● What is acute malnutrition?	10
● A spotlight on the causes	12
● How widespread is the problem?	13
● Top 20 high-burden countries	14
● How many deaths does it cause each year?	16
<b>PART 2: WHAT IS HOLDING UP PROGRESS AND WHAT CAN BE DONE?</b>	<b>18</b>
● Inadequate recognition of acute malnutrition as a leading cause of under-five deaths	18
● Scaling up treatment of severe acute malnutrition	18
A lack of integration	20
Country case-study 1: Burkina Faso	22
Health system strengthening	23
● Donor funding	23
Country case-study 2: Nepal	24
● Community-based management of acute malnutrition (CMAM) in SUN countries' 'costed plans'	24
● The importance of a broad-based approach to prevention	25
● Developing new approaches on moderate acute malnutrition	27
● Improving UN agencies' coordination	27
<b>CONCLUSIONS: A 10-point plan for tackling acute malnutrition in under-fives</b>	<b>28</b>
<b>END NOTES</b>	<b>30</b>

COVER PHOTO:  
21 YEAR OLD ASHA HOLDS HER 11 MONTH DAUGHTER  
SITA, WITH HER SON GAURAV (3 YEARS OLD) AND  
MOTHER-IN-LAW IN BHARDAHA, SAPTARI, NEPAL.

Courtesy of Sanjit Das/RESULTS UK





## ABOUT THE GENERATION NUTRITION CAMPAIGN

The Generation Nutrition campaign brings together a diverse and growing group of civil society organisations who wish to see an end to child deaths from acute malnutrition. Generation Nutrition is a global campaign, calling on governments and the international community to take urgent action to prioritise the fight against acute malnutrition, and save the lives of millions of children under the age of five.

We believe that, with strong political will, our goal of a world free of child deaths from acute malnutrition can be achieved within a generation. A full list of coalition members is on our website:

[www.generation-nutrition.org](http://www.generation-nutrition.org)

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**GENERATION  
NUTRITION**  
IF WE ACT NOW, WE CAN  
END CHILD DEATHS FROM  
ACUTE MALNUTRITION

### Partners



## EXECUTIVE SUMMARY

**52 MILLION children under five in the world today – one in twelve children in this age group – are suffering from acute malnutrition. The majority of the children affected, over 90%, are found in South and Southeast Asia and sub-Saharan Africa. Contrary to popular belief, acute malnutrition (also known as wasting) does not only occur in humanitarian crises, it is most common in apparently stable settings, in countries like India, Kenya and Indonesia.**

A child is acutely malnourished when his or her weight drops to such a low level that they are at risk of dying. The two immediate causes of the condition are a lack of food and illness. In most cases, these two factors combine to cause a rapid and significant loss of weight and - if things deteriorate and the child is not treated - death. Acute malnutrition is one of three main types of undernutrition which blights the lives of poor communities in low- and middle-income countries.

Acute malnutrition is a major public health concern. The most severe form of the condition directly causes the death of one million children under five every year. For various reasons, its contribution to child mortality is still not adequately recognised by governments. States will be unable to reduce under-five mortality rates in line with international commitments unless action is taken now to treat and prevent acute malnutrition.

Today, for the first time in history, we have the knowledge and the means to prevent and treat acute malnutrition, and save the lives of millions of children under five. A cost-effective, high-impact approach to treatment has revolutionised the fight against acute malnutrition. The community-based management of acute malnutrition (CMAM) has the potential to drastically reduce the number of deaths among children under five. Yet 90% of children suffering from severe acute malnutrition globally are currently unable to access the treatment they need. Countries with a high-burden of acute malnutrition are often those where availability of and access to effective treatment is the most limited.

In terms of prevention, the multi-sectoral efforts required in areas such as food security, gender equality, health, access to clean water and sanitation, and education are well known. Yet the numbers of children experiencing acute malnutrition fell by just 11% from 1990 to 2011.

International funding for 'basic nutrition' interventions meets just 1.4% of the need identified. For decades, acute malnutrition has been a particularly neglected issue even within the under-resourced sector of nutrition. Despite increasing commitments from international aid donors and Southern governments to tackle undernutrition overall, acute malnutrition is not yet firmly established on the global political agenda.

Until recently, acute malnutrition was seen primarily as a feature of humanitarian emergencies rather than as a development and public health priority. This is despite the long-term economic and human costs associated with the condition and the fact that most cases occur in non-emergency contexts.

Today, although services for acute malnutrition have begun to be integrated into national health systems, the majority of funding directed at acute malnutrition is channelled towards short-term humanitarian interventions. Even in countries where 'costed' national nutrition plans have been developed, the budgets allocated to the treatment of acute malnutrition are still too low to have the needed impact. The plight of 52 million children who suffer the effects of acute malnutrition each year – as well as the one million amongst them who tragically do not survive the condition – cannot be ignored. Acute malnutrition is an everyday emergency that requires urgent action.

It is time for the international community, national governments, civil society and others to take action on a problem we know how to solve. This report presents a 10-point plan for tackling the issue at both national and international levels. If we act now, we can end child deaths from acute malnutrition.



**52**  
**MILLION**  
CHILDREN UNDER FIVE  
IN THE WORLD TODAY  
ARE SUFFERING FROM  
ACUTE MALNUTRITION

# 10-POINT PLAN

## FOR TACKLING ACUTE MALNUTRITION IN UNDER-FIVES

**We call on governments and other relevant stakeholders to:**

- 1** RECOGNISE ACUTE MALNUTRITION AS A LEADING CAUSE OF CHILD DEATH.
- 2** FULLY ACKNOWLEDGE THAT ACUTE MALNUTRITION IS AN 'EVERYDAY EMERGENCY' BY INCLUDING TREATMENT AND PREVENTION IN LONG-TERM HEALTH AND DEVELOPMENT PROGRAMMES.
- 3** INTEGRATE THE COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION (CMAM) INTO CHILD HEALTH SERVICES AND INCREASE COVERAGE FOR THE TREATMENT OF SEVERE ACUTE MALNUTRITION.
- 4** STRENGTHEN HEALTH SYSTEMS TO ENABLE THE LONG-TERM EXPANSION AND AFFORDABILITY OF CMAM AND OTHER HEALTH INTERVENTIONS.
- 5** DONORS TO INCREASE LONG-TERM FUNDING FOR THE PREVENTION AND COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION AND (IN NON-CRISIS SITUATIONS) MOVE AWAY FROM SHORT-TERM EMERGENCY FUNDING MECHANISMS.
- 6** ESTABLISH NATIONAL WASTING TARGETS TO HELP FOCUS EFFORTS ON TACKLING ACUTE MALNUTRITION.
- 7** ADDRESS ACUTE MALNUTRITION IN THE POST-2015 DEVELOPMENT FRAMEWORK AS PART OF A BROADER GOAL ON NUTRITION OR FOOD AND NUTRITION SECURITY.
- 8** SUPPORT RESEARCH ON THE RELATIONSHIP BETWEEN WASTING AND STUNTING AND ALSO ON THE OTHER LONG-TERM HEALTH EFFECTS OF WASTING.
- 9** DEVELOP NEW WAYS TO TACKLE MODERATE ACUTE MALNUTRITION.
- 10** ENSURE THAT THERE IS A COORDINATED STRATEGY BY UN AGENCIES ON ACUTE MALNUTRITION.

See full version of 10-point plan on page 28





**A MOTHER LEAVES A HEALTH CENTRE WITH HER TWINS IN BOGANDÉ, BURKINA FASO AFTER COLLECTING THEIR THERAPEUTIC FOOD.**

*Courtesy of Diane Moyer/ACF.*



# ACUTE MALNUTRITION: AN EVERYDAY EMERGENCY

## INTRODUCTION

**52 MILLION CHILDREN** under five in the world are today facing a struggle between life and death due to a condition that is preventable.<sup>1</sup> These 52 million – one in twelve children in this age group and mainly living in sub-Saharan Africa and developing regions of Asia - are afflicted by a condition that seems out of place in the twenty-first century: they are at risk of dying from a mix of hunger and disease that has caused them to develop acute malnutrition.

Acute malnutrition is one of the three main types of undernutrition affecting potentially all categories of the population but especially vulnerable groups such as children under-five, pregnant and lactating women, and people living with a disease or chronic illness. Undernutrition is, of course, also shaped by socio-economic circumstances: it blights the poorest households most and is the biggest problem in low- and middle-income countries.

In recent years, donors, as well as developing countries with a high-burden of undernutrition, have started to pay more attention to the issue. The setting up of the international, multi-stakeholder initiative known as Scaling Up Nutrition (SUN) in 2010<sup>2</sup>; the approval by members of the World Health Organisation (WHO) in 2012 of a set of global nutrition targets; and the pledging of \$4.15 billion for nutrition at 2013's Nutrition for Growth high-level event<sup>3</sup> are all testament to the progress being made.

However, this progress now needs consolidating. The SUN Movement is still a relatively new phenomenon, despite some impressive results to date. Donors' financial contributions to nutrition are still low compared to other international development sectors and the mainstreaming of nutrition goals into agriculture, health and social protection programmes – to name just a few – remains poorly developed.

Within this context of a relative lack of attention to undernutrition, acute malnutrition has been a particularly neglected subject in the past. It has been a marginalised issue in a too often marginalised sector. For a long time, acute malnutrition was largely seen by international aid agencies as something to tackle only in crisis settings. Amongst Western publics, the popular perception of acute malnutrition remains the image of the starving child during the Ethiopian famine of 1984-85. While food shortages caused by conflict and natural disasters remain an important trigger for acute malnutrition and must be dealt with, the majority of cases do not, in fact, occur in such settings. Many more cases are found in apparently stable settings, for example, in the villages, towns and cities of India, Kenya and Indonesia. Moreover, the causes of acute malnutrition go beyond a simple lack of food. The failure to fully take into account these factors has been a significant reason for the poor response to acute malnutrition in the past.

Over the course of the last 25 years, significant progress has been made in tackling child deaths from diseases such as HIV/AIDS, malaria and tuberculosis, yet global rates of acute malnutrition have fallen by just 11%.<sup>4</sup> Child deaths from the condition remain alarmingly high, in large part due to extremely limited access to treatment: just one child in ten who suffers from the most severe form of acute malnutrition is currently able to access the treatment they urgently need.<sup>5</sup>





## THE GENERATION NUTRITION CAMPAIGN

The Generation Nutrition campaign has been started by a diverse group of civil society organisations who wish to see this situation turned around.<sup>6</sup> We are calling on governments to act to end the scandal of over one million children dying from acute malnutrition every year. We believe that, with sufficient political will and funding, this goal can be reached before 2035 – the target date set by UNICEF for all countries to achieve a low rate of under-five mortality.<sup>7</sup> But the work must start now.

### THE THREE CENTRAL AIMS OF THE CAMPAIGN ARE:

- 1 For every child under five suffering from acute malnutrition to have access to appropriate and high-quality treatment
- 2 For prevention strategies to be enhanced in order to stop children developing acute malnutrition in the first place
- 3 For action on acute malnutrition to feature strongly in all major global and national initiatives to tackle poverty, including the post-2015 development framework.

All three of these areas will need to be addressed if child deaths from the condition are to be ended. With 2014 marking the 25th anniversary of governments signing the landmark UN Convention on the Rights of the Child, we are calling on states worldwide to renew the commitment they made in Article 24 of the Convention: To “recognize the right of the child to the enjoyment of the highest attainable standard of health” and “to combat disease and malnutrition”.

GLOBAL RATES OF  
ACUTE MALNUTRITION  
HAVE FALLEN BY JUST

**11%**

IN THE LAST 25 YEARS



**THREE WOMEN (ONE ON PAGE 8 AND TWO ON PAGE 9) AND THEIR CHILDREN SIT AFTER TAKING THEIR CHILDREN TO THE MEDICAL CLINIC IN CHANIKA, TANZANIA.**

Courtesy of Daniel Hayduk/RESULTS UK.

# PART 1

## THE PROBLEM EXPLAINED

### WHAT IS ACUTE MALNUTRITION?

**A CHILD IS ACUTELY MALNOURISHED** when his or her weight drops to such a low level that they are at risk of dying. There are two immediate causes of the condition. The first is when a child does not have enough to eat.<sup>8</sup> The second is when a child develops an illness or infection. In most cases, these factors combine to cause a rapid and significant loss of weight and - if things deteriorate and the child is not treated - death.<sup>9</sup> Another term for acute malnutrition is 'wasting', a word which perhaps better conveys what actually happens to a child with the condition: the body literally wastes away.

A child can be 'moderately' or 'severely' acutely malnourished.<sup>10</sup> Severe acute malnutrition (SAM) carries the highest risk of death - nine times higher than for a healthy child. But a child with moderate acute malnutrition (MAM) also faces a three times greater risk of dying than a well-nourished child.<sup>11</sup>

The condition develops over a short period of time, usually in a matter of days or weeks, as a result of the 'shocks' to the body mentioned above. This is in contrast to chronic malnutrition or stunting, which develops over a longer time period.<sup>12</sup>

Acute malnutrition is closely associated with infection and illness. In fact, a 'vicious circle' can be said to exist between the two. On the one hand, malnutrition weakens a child's defences against infection; while on the other hand, infection reduces appetite and prevents the body's normal absorption of food, hence worsening the malnutrition. Most deaths from acute malnutrition are linked to infections such as malaria, diarrhoea, pneumonia, tuberculosis (TB) and HIV/AIDS. This makes it essential to develop an integrated response to treating both acute malnutrition and these associated diseases. The benefits of jointly tackling TB and acute malnutrition are illustrated by Umali's story from Malawi - see below.

### COMBINING LIFE-SAVING TREATMENT FOR TUBERCULOSIS AND ACUTE MALNUTRITION: **UMALI'S STORY**



Umali (second from the right) was just over a year old when his mother died. He was still breastfeeding at the time. His next of kin struggled to find food for him and his older brother, and Umali quickly became very ill. He was then sent to his grandparents' home in a village in Southern Malawi. "I was shocked when I first saw Umali; he was so sick, unhealthy, and miserable. I didn't think that he would live to see this day," says his grandmother Margaret Saidi. "I couldn't



Courtesy of Marlene Kaliko/Target TB

believe that nobody had tried to help this child who was obviously dying from malnutrition. I prayed for his survival." Despite a fantastic appetite, Umali kept vomiting. Yet it was a persistent cough for over a month which led his grandmother to seek medical attention, by which time Umali was so sick he required

advanced treatment and was sent to Balaka district hospital.

Due to evidence that malnourished children are particularly vulnerable to tuberculosis (TB), Target TB has established an integrated programme at Balaka hospital that ensures that each patient in the malnutrition rehabilitation

unit is routinely screened for TB. So shortly after his admission, Umali had a chest X-ray and was diagnosed with TB. He immediately started receiving TB treatment and nutritional supplements and his health improved quickly. Now two years old, Umali is a healthy, happy little boy, with his life ahead of him.

# WHAT ACUTE MALNUTRITION MEANS FOR A CHILD

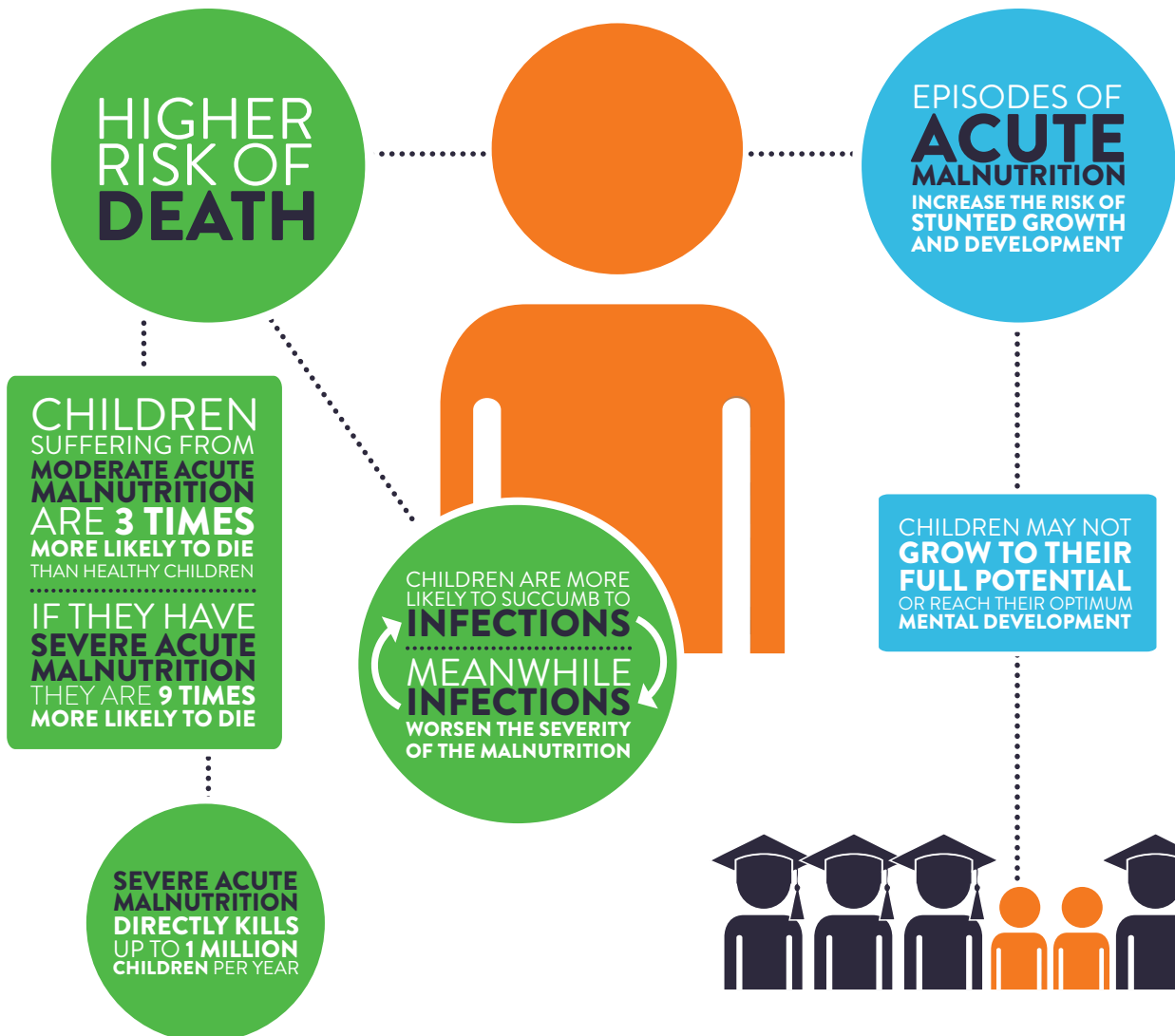


**1 IN 12 CHILDREN GLOBALLY SUFFER FROM ACUTE MALNUTRITION**



## WHAT DOES THIS MEAN FOR THE CHILD

Significant weight loss, weakened immune systems and a reduced ability to fight off infections.





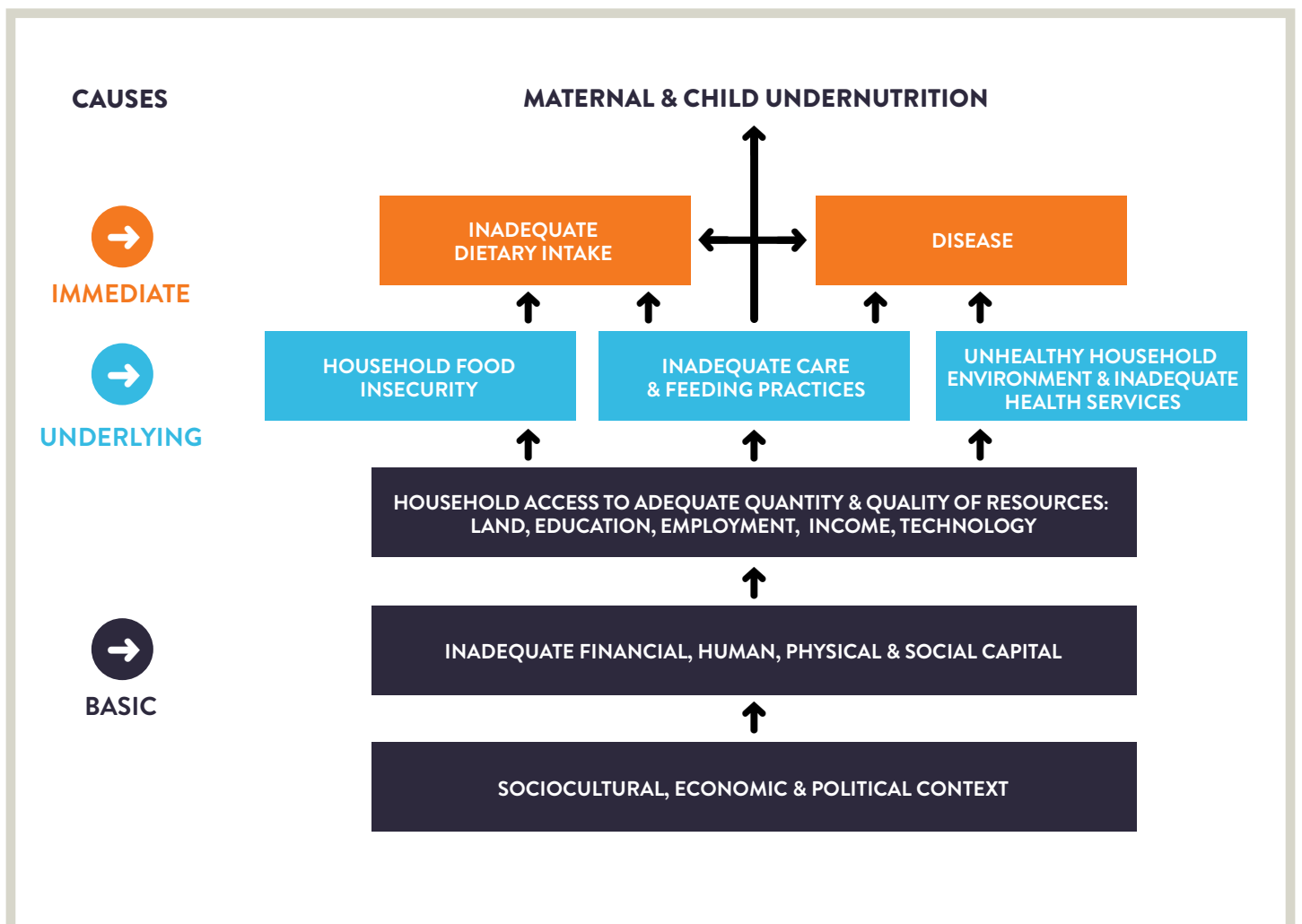
Yet acute malnutrition is not only a condition that kills. Even if a child receives the appropriate treatment and recovers, there may still be consequences in the long term for their overall health and developmental potential. These include an increased risk of stunted growth and the associated risk of impaired cognitive development; and also a greater chance of developing non-communicable diseases in adulthood, such as heart disease, anxiety and psychological disorders.<sup>13</sup> This demonstrates that it is of utmost importance to invest not only in the treatment of acute malnutrition but also in its prevention.

### A SPOTLIGHT ON THE CAUSES

Beyond the immediate causes of acute malnutrition, there are numerous ‘underlying’ and ‘basic’ causes of the condition, which are described in the flowchart below. It should be noted that these factors are common to all forms of undernutrition.

In most cases there is not one single cause of acute malnutrition but a combination of factors.

# THE CAUSES OF MATERNAL & CHILD UNDERNUTRITION



For example, a 10-month old child may have experienced a reduction in food intake when his or her mother started the weaning process some months back and there was not an adequate supply of solid food to supplement the breast milk – perhaps because the transition occurred during the ‘hunger season’, when food was scarce. This then triggers a loss of weight and a deficiency of essential proteins and vitamins, making the child more vulnerable to contracting diarrhoeal infections. The diarrhoea in turn exacerbates the weight loss even more and a potentially life-threatening situation has developed. Different underlying and basic causes would have played a role in creating the conditions for the undernutrition to develop.

Stunting affects a larger proportion of the under-five population than acute malnutrition. However, in many cases the two conditions are present in the same communities and even in the same child.<sup>15</sup> More research is needed to fully understand the causal relationship between the two, although existing evidence suggests that bouts of acute malnutrition can contribute to stunting.<sup>16</sup> Having enhanced knowledge on this issue would enable policy-makers to design more effective prevention strategies for tackling both conditions.

## HOW WIDESPREAD IS THE PROBLEM?

According to current UN and World Bank estimates, acute malnutrition affects 52 million children across the world, or one in twelve children in this age group.

However, it should be noted that this is a ‘prevalence’-based estimation, which fails to account for those children who develop acute malnutrition at another point in the year, when the survey is not being carried out. When ‘incidence’ is also factored in, the number of cases rises significantly.<sup>17</sup> Recent UNICEF figures, which also consider incidence, suggest that the number of children suffering from severe acute malnutrition worldwide could be in the range of 25-35 million, which is substantially higher than the 17 million estimated using the prevalence-only measure (Box 1 explains the difference between ‘incidence’ and ‘prevalence’).<sup>18</sup>

The vast majority of children suffering from acute malnutrition are found in the developing world. 90% of cases occur in sub-Saharan Africa (13 million or 9.4% of under-fives in that region) and South and Southeast Asia (28 million or 15% of under-fives, and 5 million or 10% of under-fives respectively).<sup>19</sup> In the worst-affected countries, the national rates of wasting vary from 10% to 20% of the under-five population.

### BOX 1

**Prevalence measures the proportion or number of people suffering from a disease at a specific point in time. Incidence measures the number of new cases of a disease occurring over a given time period (typically one year).**

# 90%

OF CASES OF CHILDREN SUFFERING FROM ACUTE MALNUTRITION OCCUR IN SOUTH AND SOUTHEAST ASIA & SUB-SAHARAN AFRICA



**A HEALTH VOLUNTEER TAKES A MUAC READING DURING A NUTRITION SCREENING AT THE LOCAL HEALTH CENTRE IN HANUMAN NAGAR, SAPTARI, NEPAL.**

Courtesy of Sanjit Da/RESULTS UK.

## TOP 20 HIGH BURDEN COUNTRIES

Table 1 sets out the top 20, 'high-burden' countries for acute malnutrition. The ranking has been calculated based on the number of under-fives affected in each country, although the rates are also included for reference.<sup>20</sup>

**TABLE 1: TOP 20 HIGH-BURDEN COUNTRIES FOR ACUTE MALNUTRITION**

RANK	COUNTRY	YEAR	% CHILDREN UNDER 5 WITH WASTING (moderate or severe)	NUMBER OF WASTED CHILDREN UNDER 5 (moderate or severe) <sup>21</sup>
1	India	2005-06	20	24,823,482
2	Pakistan	2011	14.8	3,173,642
3	Indonesia	2010	12.3	3,084,062
4	Nigeria	2011	10.2	2,941,011
5	Bangladesh	2011	15.7	2,390,165
6	China	2010	2.3	1,968,317
7	Ethiopia	2010-11	10.1	1,410,087
8	DRC	2010	8.5	950,322
9	Sudan	2010	16.4	915,611
10	Philippines	2011	7.3	819,143
11	Egypt	2008	7.9	678,170
12	Niger	2012	18	638,603
13	Kenya	2009	7	462,891
14	Yemen	2011	13	438,426
15	Afghanistan	2004	8.6	411,094
16	South Sudan	2010	22.7	363,680
17	Chad	2010	15.7	359,839
18	Iraq	2011	7.4	352,020
19	Myanmar	2009	7.9	349,611
20	Nepal	2011	11.2	346,506

SOURCE: CALCULATION BY AUTHORS BASED ON UNICEF-WHO-WORLD BANK JOINT DATASET<sup>22</sup>

### WHAT CONCLUSIONS CAN BE DRAWN FROM THESE FIGURES?

- 1 Asian countries dominate the top 20 table. They account for four out of the top five high-burden countries. The number of children affected in India (25 million) is higher than all the other top 20 countries combined and represents almost half of the global total.
- 2 The worst-affected regions in Africa are West, Central and East Africa.
- 3 South Asia in particular has a very high number of cases. However, at present, this region also has a very low level of treatment coverage. It is here that coverage needs to be scaled up the most if global targets on reducing deaths from wasting or wasting rates are to be reached. In a number of South Asian countries, there has been a reluctance to date to introduce treatment approaches relying on ready-to-use therapeutic food (RUTF), despite the evidence of their effectiveness.
- 4 The table also highlights the fact that acute malnutrition does not only occur in emergency situations. Many of the top 20 high-burden countries are relatively stable countries, where widespread food crises and conflicts are fortunately rare. This is the case, for example, for India and Indonesia, where, in spite of their relative stability, rates of acute malnutrition are 20% and 12% respectively.<sup>23</sup> This shows that acute malnutrition is in fact an 'everyday emergency', fuelled above all by poverty and inequality.



THERE ARE **52 MILLION**  
ACUTELY MALNOURISHED  
CHILDREN IN THE WORLD  
**WHERE DO THEY LIVE?**



# 1 MILLION

CHILDREN UNDER THE  
AGE OF FIVE DIE EVERY  
YEAR FROM SEVERE  
ACUTE MALNUTRITION

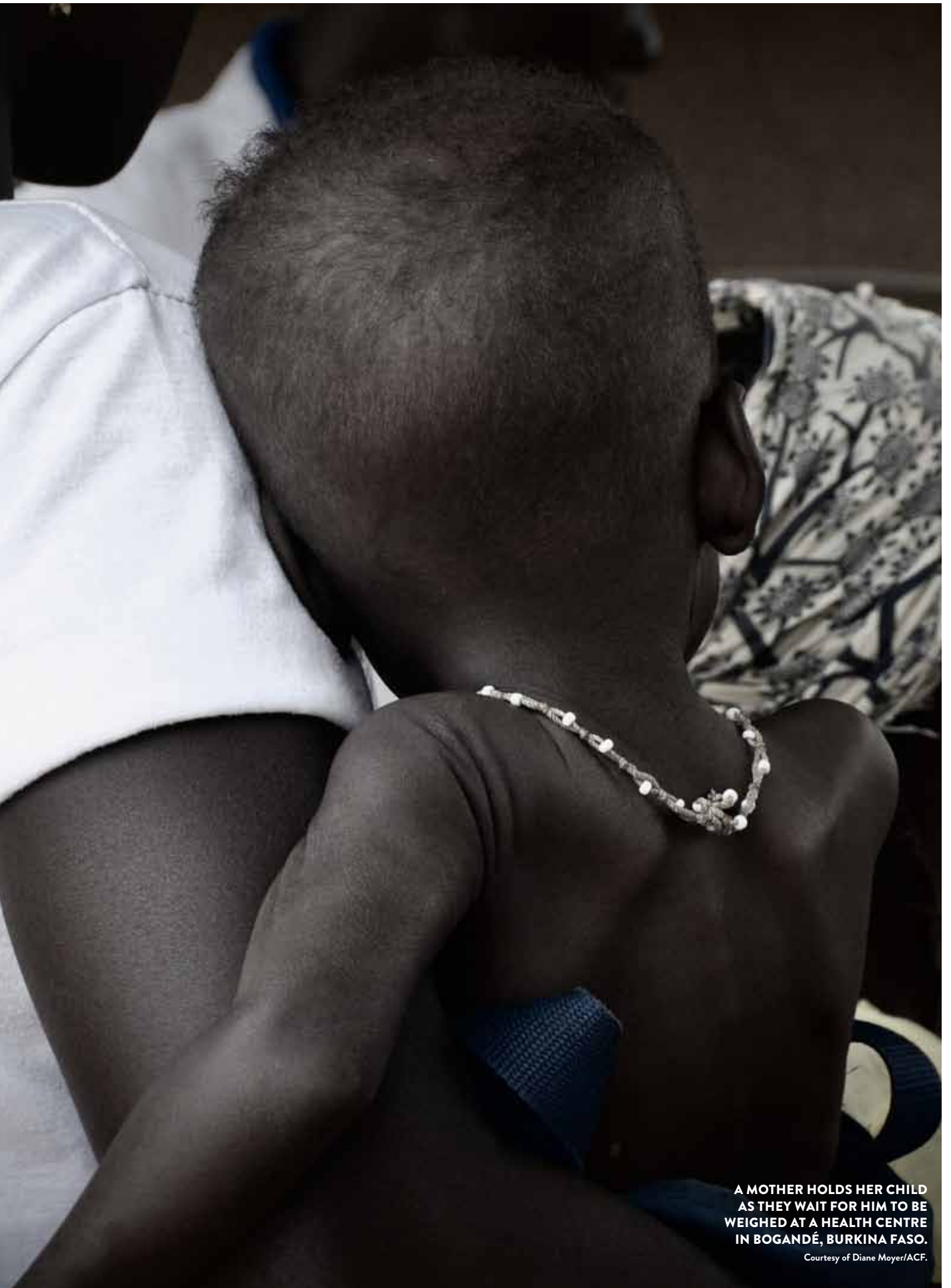
## HOW MANY DEATHS DOES ACUTE MALNUTRITION CAUSE EACH YEAR?

The UN estimates that around one million children under the age of five die every year from severe acute malnutrition (SAM).<sup>24</sup>

At present, it is not possible to provide more than estimates for the number of deaths from SAM. One of the reasons is that – in many countries and internationally – the systems for recording deaths related to severe acute malnutrition are either non-existent or underdeveloped. Moreover, deaths due to SAM are often recorded as deaths from infectious diseases such as malaria, pneumonia and TB, even though the death was actually caused by a combination of the two.

Moderate acute malnutrition does not directly cause deaths, but nevertheless is a significant contributing factor in a large number of preventable under-five deaths every year.





**A MOTHER HOLDS HER CHILD  
AS THEY WAIT FOR HIM TO BE  
WEIGHED AT A HEALTH CENTRE  
IN BOGANDÉ, BURKINA FASO.**

*Courtesy of Diane Meyer/ACF.*



# PART 2 WHAT IS HOLDING UP PROGRESS AND WHAT CAN BE DONE?

**EFFECTIVE APPROACHES** exist today for treating and preventing acute malnutrition. So why do 52 million children in the world today continue to suffer from the condition and an estimated one million children die each year from its severest form? This question is the focus of the next part of the report.

More details of the specific challenges faced by two countries – Nepal and Burkina Faso – can be found in the country case studies on pages 22 and 24.

## 1. INADEQUATE RECOGNITION OF ACUTE MALNUTRITION AS A LEADING CAUSE OF UNDERFIVE DEATHS

Politically speaking, acute malnutrition tends to be invisible; until, that is, a crisis hits. Malnourished children usually come from poorer, marginalised families, who lack a strong voice in the political arena.<sup>25</sup> This tendency is reinforced by the fact that rates of acute malnutrition are generally higher in rural areas, far from the main ‘seat of power’ in the capital city.

This relative neglect of the issue has been one of the reasons why levels of acute malnutrition have remained stubbornly high in recent decades: between 1990 and 2011 the global burden of acute malnutrition fell by just 11%, from 58 to 52 million.<sup>26</sup> In sub-Saharan Africa, the numbers of acutely malnourished children under-five actually grew during this period from 10 million to 13 million.

This picture contrasts starkly with recent progress in reducing deaths from diarrhoea, measles, respiratory infections and malaria.<sup>27</sup> Action by states to combat these and other childhood diseases has been one of the main contributors to the 40% global decline in under-five deaths seen since 1990 (12 million in 1990 to 6.6 million in 2013).<sup>28</sup>

So, our argument is simple. If states wish to see further declines in child mortality, including the attainment of Millennium Development Goal (MDG) 4, they can no longer afford to ignore acute malnutrition, which directly kills one million children under five each year.

In 2012, member countries of the WHO voted at the World Health Assembly (WHA) to adopt a set of six global targets aimed at tackling undernutrition and obesity. One of the targets calls for a reduction in the global average rate of acute malnutrition to below 5% by 2025. We believe it is essential that countries take steps now to introduce national policies, strategies and programmes that will enable them to meet this global wasting target.

A number of SUN countries have in fact already established their own national target on wasting, which is a positive trend. Donor governments, with the backing of the WHO Secretariat, should assist by giving financial and technical support to help countries to meet their various national targets on undernutrition, including those on wasting.

Another key opportunity to embed action to end child deaths from acute malnutrition in the global policy agenda is the successor framework to the Millennium Development Goals (MDGs). The post-2015 development framework should be an ambitious set of commitments by states to address the multiple causes of poverty and inequality that truly “leaves no-one behind”. Regarding the issue of undernutrition, there should be a standalone goal included on nutrition, or food and nutrition security. This goal should include a specific target on acute malnutrition that goes beyond the ambition of the current World Health Assembly target. It should commit states to a more significant reduction in the rates of acute malnutrition and set them on a clear path towards ending under-five deaths from the condition. Furthermore, the targets and indicators in other goal areas, such as health/universal health coverage, gender, water and sanitation, agriculture and food security, should be designed in a way that helps accelerate progress in tackling undernutrition.

## SHOWING THE WAY FORWARD: COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION



CMAM is a community-based strategy for diagnosing and treating both moderate and severe acute malnutrition. Here we focus on its benefits for SAM treatment. Previously all children with SAM had to be treated in hospital. This severely limited the numbers of children who could receive treatment. Now, with the introduction of a community-based approach, many more children are being reached and helped. Children suffering from acute malnutrition can now be easily identified by a health worker using a tape to measure a child's mid-upper arm circumference (MUAC). This MUAC tape uses

a simple traffic light system to immediately alert the health worker to a child's condition and the necessary course of action. Children found to be in the 'red zone' are severely acutely malnourished. The health worker refers these children to a local health clinic for assessment. Assuming there are no medical complications, the child is given a standard course of treatment by clinic staff comprising antibiotics (to ward off infection), vitamin A, deworming drugs and – if necessary – anti-malarial drugs. The child can then be treated at home by the parent or care-provider giving him or her ready-to-use therapeutic food



A COMMUNITY HEALTH WORKER TAKES THE MUAC READING OF A CHILD IN NORTHERN KENYA.

Courtesy of Saul Guerrero/ACF.

(RUTF) to eat, which is supplied free-of-charge. (RUTF contains all the essential nutrients needed to ensure children recover from acute malnutrition.) During this phase the child only has to be taken once a week to the

local clinic for a check-up. The average length of the treatment is just five to six weeks. Under the CMAM approach, only children who develop SAM with medical complications require hospitalisation.

## 2. SCALING UP TREATMENT OF SEVERE ACUTE MALNUTRITION

Significant progress has been made over the last decade in expanding the community-based approach for diagnosing and treating acute malnutrition known as CMAM (community-based management of acute malnutrition). The main aspects of this approach are described in the box above.

The community-based approach has revolutionised the way we can help children with acute malnutrition. Not only can far more children be reached but these children are much less likely to drop out of treatment as they undergo treatment primarily in their own home. The introduction of CMAM in developing countries has resulted in a typical cure rate for children suffering from SAM of 84%.<sup>29</sup>

A recent study published in *The Lancet* calculated the potential impact in terms of children's lives saved of scaling up different 'direct' nutrition interventions (see page 26 for an explanation of 'direct' interventions). Out of the ten interventions assessed, CMAM was shown to have the greatest potential for saving lives: 435,000 lives saved per annum in the under-five age group.<sup>30</sup>

CMAM is also a cost-effective intervention. At \$42 - \$53 per 'disability-adjusted life year' (DALY) averted, the cost of treatment is similar to that of other comparable child survival interventions.<sup>31</sup> (DALYs refer to the number of years of a life lost due to illness, disability or premature death.) The story of how the community-based approach to treatment helped Rougui Gueye in Senegal to recover from SAM is described on page 20.

The introduction of CMAM has resulted in a typical cure rate for children suffering from SAM of 84%



COMMUNITY HEALTHWORKER AMINATA DIALLO (RIGHT), WITH ROUGUI GUEYE, NOW FULLY RECOVERED, AND HER MOTHER IN OURO SIDI, SENEGAL.

Courtesy of Ben Hobbs.

## → AMINATA & ROUGUI

Aminata Diallo works at the local health post in Ouro Sidi village in Senegal. Her job is to manage the drug stock. In her spare time, she also volunteers as a community health worker.

This role involves checking (using a MUAC tape) which children in the villages near where she lives have acute malnutrition. She refers children with the condition to the health post for further assessment and treatment, in line with the national protocol for CMAM. (Treatment for SAM follows the approach described on page 19.) If a child has MAM, she ensures that supplies of fortified flour get delivered to the child's

home. Aminata is therefore at the frontline of the fight against acute malnutrition in her country.

In 2013 Aminata discovered that a girl called Rougui Gueye, living in Ouro Sidi, had become severely acutely malnourished. Rougui was immediately referred to the health post and – as her case had complications – on to the district health centre in Fomihara, where she received treatment. Fortunately, she made a full recovery and is now back at home with her family, enjoying life in much the same way as any other two year old. The SAM treatment programme in this

district is being supported by Action Against Hunger, with the main focus on technical support and training for health staff.

The families in Rougui's village depend mainly on arable farming for their food and income, with millet being the staple crop. During the hunger season (April to September), meals get restricted to just two per day. "We always have lunch though" was the surprisingly upbeat remark by one of the villagers. This lack of food, combined with a poor dietary diversity, is one of the main causes of acute malnutrition amongst children in the village.

SOURCE: ACTION AGAINST HUNGER

Currently 60 countries around the world offer services for CMAM.<sup>32</sup> By 2009, it was reported that 1 million children were being admitted into SAM treatment programmes worldwide. The number of children reached increased to 2 million in 2011, and to 2.7 million in 2012.<sup>33</sup> Despite this clear progress, today just 10% of children affected by SAM globally have access to treatment. Much more must be done to scale up treatment programmes to ensure that every child is able to access the care they urgently need to recover.

Why is the coverage for treatment so low? The answer has to do with the lack of integration of SAM treatment into existing health services. But it is also the result of the weak state of health services in the countries worst affected by acute malnutrition. We examine these issues in turn below.

### 2a. A lack of integration

In Part 1, we listed the 20 countries with the highest burden of acute malnutrition amongst under-fives. The following table examines the extent to which these countries have succeeded in including SAM treatment in the basic health package (also known as the essential health package).<sup>34</sup> This is arguably *the* key measure of successful integration.

**TABLE 2: TOP 20 HIGH-BURDEN COUNTRIES FOR ACUTE MALNUTRITION: EXTENT OF INCLUSION OF SAM TREATMENT IN THE BASIC HEALTH PACKAGE**

COUNTRY & RANK	SAM TREATMENT INCLUDED FULLY, PARTIALLY OR NOT YET INCLUDED IN BASIC HEALTH PACKAGE? (Or information not available)	COUNTRY & RANK	SAM TREATMENT INCLUDED FULLY, PARTIALLY OR NOT YET INCLUDED IN BASIC HEALTH PACKAGE? (Or information not available)
1. India	Partial	11. Egypt	n/a
2. Pakistan	No	12. Niger	Full
3. Indonesia	Partial	13. Kenya	Full
4. Nigeria	Partial	14. Yemen	No
5. Bangladesh	No	15. Afghanistan	Full
6. China	n/a	16. South Sudan	Partial
7. Ethiopia	Full	17. Chad	Partial
8. DRC	Partial	18. Iraq	Partial
9. Sudan	Partial	19. Myanmar	No
10. Philippines	Partial	20. Nepal	Full

SOURCE: UNICEF.<sup>35</sup> N.B. INFORMATION IN TABLE IS BASED ON REPORTS BY GOVERNMENTS IN THESE COUNTRIES.

In summary, the information shows that:

- 1 Only five of the top 20 high-burden countries for wasting reported a full integration of SAM treatment into the basic health package (Ethiopia, Niger, Kenya, Afghanistan and Nepal).
- 2 Nine countries reported that integration is still only partial.
- 3 Four countries reported that there has been no integration (Pakistan, Bangladesh, Yemen and Myanmar).

There is therefore still considerable progress to be made in this key area of integration.

In some high-burden countries, especially those in Asia, the protocols for treating SAM via a community-based approach have yet to be approved by the government. So, CMAM integration there is still in its early stages. In the countries which have adopted a protocol, there are three areas where integration remains particularly weak – in addition to the aforementioned absence of CMAM from the basic health package. These are:

- The inclusion of RUTFs on the essential supplies list
- The development of national curricula for training health staff in the diagnosis and treatment of acute malnutrition
- The allocation of funds for SAM treatment in annual health sector plans.<sup>36</sup>

The case study from Burkina Faso on page 22 describes some of the challenges faced when integrating CMAM into national health services.

As governments increase their focus on scaling up CMAM, there is much that can be learnt from programmes that exist already: both those run by NGOs and those – growing in number – operated by Ministries of Health. Many of the barriers to increasing coverage for the treatment of acute malnutrition within existing programmes are similar to those faced by other public health interventions.<sup>37</sup> Some of the main ones are: a lack of awareness of the programme; a lack of awareness of undernutrition; a prohibitive distance and/or journey time to the health centre; high opportunity costs; and a previous rejection from the programme.<sup>38</sup>

A MOTHER RECEIVES HEALTH AND NUTRITION EDUCATION AT A UNICEF PROGRAMME IN PHOM LOU, CAMBODIA.

Courtesy of Nicholas Axelrod/Ruom.



**5**  
ONLY 5  
OF THE TOP 20  
COUNTRIES HAVE  
FULLY INTEGRATED  
CMAM INTO THE  
BASIC HEALTH  
PACKAGE





A GROUP OF WOMEN GATHER IN PAMA, BURKINA FASO TO DISCUSS BARRIERS TO ACCESSING HEALTH CENTRES WITH A HEALTHWORKER.

Courtesy of Diane Moyer/ACF.

## CASE-STUDY 1: BURKINA FASO

In recent years Burkina Faso has faced a succession of food crises. One of the most serious took place in 2012. According to the Food Security Forecasting Committee, more than 54% of Burkinabé households engaged in farming will not be able to meet their food needs in 2014.

It is estimated that 60% of deaths among children under five in the country are attributable to malnutrition.<sup>39</sup> In 2013, the Ministry of Health reported that 9% of under-fives were suffering from acute malnutrition and 32% from chronic malnutrition.<sup>40</sup> In the same year, approximately 417,000 children under five were acutely malnourished.<sup>41</sup>

In the Est region, one of the worst affected, rates of malnutrition are particularly high between April and June, when a family's food resources are low.<sup>42</sup> The principal causes of malnutrition are poor hygiene practices, inappropriate infant and young child feeding practices, insufficient access to clean drinking water, poor sanitation, household food insecurity, a lack of dietary diversity and high rates of childhood diseases.

Since 2007, Burkina Faso has made significant progress in promoting the Integrated Management of Acute Malnutrition (IMAM). For example, during this period it developed its first IMAM protocol. This protocol is currently in the process of being revised. However, the protocol has not been fully implemented by health staff, who still do not perceive the condition to be a health issue. This therefore affects the quality of the detection and treatment of acute malnutrition. Despite this, a major effort is now underway to scale up IMAM in the country. Moreover, therapeutic foods used in the treatment of acute malnutrition have been included in the list of medicines available at the Generic Drugs Purchasing Agency.

Despite the proactive stance of the Burkinabé government on this question, different barriers continue to prevent a high-quality roll-out of IMAM at the level of local health centres. Procedures

for diagnosing malnutrition and community screening are still not adequately developed.

In the Est region, the water is dirty in half of health centres and more than 70% of health centres have an unclean environment. Throughout the country, there is an insufficient number of health centres. The long distance to travel to a centre discourages mothers from taking their children there for care. This means people frequently have to rely on traditional healers.<sup>43</sup> The health centres that do exist are often poorly equipped and are understaffed.<sup>44</sup>

The final barrier to the treatment of acute malnutrition - and to accessing health services in general - is the cost of healthcare. This cannot be afforded by families and it particularly affects poor households.

Efforts to prevent undernutrition are guided by three national policies: the National Programme for the Rural Sector (2011), the National Social Protection Policy (2012) and the National Food and Nutrition Security Policy (currently under development).

At certain times of the year, the poorest households are forced to cut back on their daily food intake, which puts children aged 6-23 months at particular risk of becoming acutely malnourished. For this reason a number of NGOs have put in place seasonal nutrition 'safety nets' which include the distribution of enriched, locally-produced flour. These programmes are helping to protect at-risk children by ensuring they have enough food to eat and a balanced diet during this period.

Burkinabé civil society organisations have a key role to play in advocacy. They can help ensure that the revised IMAM protocol gets effectively implemented and that regular community screenings take place. They can advocate for the curricula of health personnel to be modified to fully integrate IMAM; and for the financial barriers preventing children under five from accessing care to be removed.

## 2b. Strengthening health systems

Treatment programmes will only ever be as effective as the system through which they are being delivered. Weak health systems in high-burden countries are currently a major constraint to expanding the treatment of severe acute malnutrition. The problems relate to both the quality and reach of state-provided healthcare, as well as its affordability.

The best way to address this is to ensure that, alongside efforts to integrate CMAM, there is an equally strong focus on health system strengthening overall. If health systems are not effectively strengthened, there is a risk that the introduction of new treatment programmes will overburden the system. The World Health Organisation has identified the following six 'building blocks' for health system strengthening: service delivery, the health workforce, information systems, essential medicines and supplies, financing and governance.

User fees remain a major barrier preventing families from accessing healthcare in nearly all developing countries. The promotion of free access to primary health services should therefore go hand-in-hand with advocacy for greater integration and coverage of CMAM services.

Opportunities also need to be explored for aligning and combining CMAM with treatment of infectious diseases, such as malaria, TB, pneumonia, diarrhoea and HIV/AIDS, especially in view of the close relationship between wasting and infections. This is already happening in many contexts; however, a closer alignment of different health interventions would be beneficial. For example, CMAM could be linked to Integrated Community Case Management, which is the approach used for the diagnosis, treatment and prevention of malaria, pneumonia and diarrhoea at the community level.<sup>45</sup> Such an alignment avoids the creation of parallel healthcare delivery structures and is thus more cost-effective. It also offers the potential to increase the number of children who are diagnosed and treated for each disease or condition.

## 3. DONOR FUNDING

Current international funding for nutrition falls far short of requirements. For example, from 2009 to 2011, aid to the nutrition sector from all donors was equivalent to around 0.8% of overall Overseas Development Assistance (ODA), whilst 'basic nutrition' ODA amounted to a mere 1.4% of the identified need.<sup>46</sup> At the Nutrition for Growth high-level event in June 2013 donors pledged a total of \$4.15 billion of additional funding for nutrition in the period up to 2020.<sup>47</sup> However, even with this increased commitment the level of aid is well below the amount needed for the scale up of direct nutrition interventions in high-burden countries, estimated to be \$9.6 billion per year (NB. this figure includes both ODA and developing countries' own resources).<sup>48</sup>

As regards acute malnutrition, donor funding for CMAM programmes tends to be short-term (typically six months) and generally comes from humanitarian aid budgets.<sup>49</sup> This reflects the fact that donors still view the issue through an emergency lens, despite the fact that the majority of cases of acute malnutrition actually occur in stable situations. The short-term nature of funding makes it difficult for developing country governments to develop, in conjunction with donors, long-term strategies for scaling up CMAM.<sup>50</sup>

Humanitarian funding will, of course, remain important as natural disasters and conflicts will continue to occur, but it should now be complemented by donors financing the treatment and prevention of acute malnutrition via their mainstream development budgets. For example, donors could start to fund the scaling up of CMAM through their aid to the health sector. They could also explore ways to build links between humanitarian and development funding streams because the distinction between emergency and stable situations is rarely straightforward. Some examples of different approaches that donors could take are described in Box 2.

### BOX 2

#### POSSIBLE MODELS FOR INCREASING & IMPROVING DONOR FUNDING FOR ACUTE MALNUTRITION

- In Nepal, a 'basket fund' is currently being set up to provide funds for the nutrition interventions included in the country's multi-sectoral nutrition plan. Contributions will be made to it by both the Government and donors. This is a model that could be replicated in other countries (see Nepal case study on p 24).
- Donors could fund CMAM 'scale-up' within their portfolio of (long-term) health programmes; or – if such a structure exists – they could fund it via 'pooled' health funds at the country level, which involve several different donors.
- In Kenya, donors including DFID and ECHO have shifted to multi-year, more predictable funding to expand the integrated management of acute malnutrition and have increased the emphasis on support to the Ministry of Health rather than the direct provision of services.
- In Yemen DFID is giving a three-year nutrition grant to support action on acute malnutrition through a mixture of development and humanitarian aid. It covers both the treatment of acute malnutrition and prevention of its underlying causes. This reflects the situation in Yemen as being one of a complex emergency, with both immediate and longer term nutrition needs.
- Another innovation, although not specific to acute malnutrition, is the 'catalytic financing facility' announced by DFID, UBS Optimus Foundation, and the Children's Investment Fund Foundation (CIFF) at 2013's Nutrition for Growth event. The objective of the facility is to establish new funding sources for nutrition. The additional funds will be used to accelerate the roll-out of high-impact, national nutrition programmes, including CMAM interventions, in high-burden countries.



CAREGIVERS GATHER TO HAVE THEIR CHILDREN CHECKED DURING A NUTRITION SCREENING IN INARWA IN SAPTARI, NEPAL.

Courtesy of Sanjit Das

## CASE-STUDY 2: NEPAL

The lasting impact of a 10-year armed conflict, migration, displacement and political instability have all contributed to a challenging environment for tackling undernutrition in Nepal. Although rates of chronic malnutrition have come down over the last ten years - from 57% to 41% - there has been no change in the national rates for acute malnutrition, which remain at 11%.<sup>52</sup> In 2012 and 2013, only one in eight severely acutely malnourished children in the country received treatment.<sup>53</sup>

The causes of acute malnutrition in Nepal are numerous and vary according to the geographical, economic and social context. Food insecurity of some degree is experienced by over half of all households.<sup>54</sup> Nationally the most commonly cited cause of food insecurity is insecure and low incomes.<sup>55</sup> In rural areas populations are particularly vulnerable to natural disasters such as floods, landslides and droughts. Heavy rains in the monsoon season pose a double threat. Not only do they damage crops but they also cause outbreaks of infectious water-borne diseases such as cholera and diarrhoea.

Other causes of acute malnutrition in Nepal are a lack of dietary diversity, poor hygiene and sanitation, HIV/AIDS, inadequate care practices, the disruption of basic social services due to the conflict, and a lack of adequately trained government personnel.

One of eight 'early riser' countries in the SUN Movement, the Government of Nepal has committed to taking action on undernutrition and has developed a comprehensive Multi-Sectoral Nutrition Plan (MSNP) to

guide their national approach. The MSNP promotes a cross-governmental, integrated approach to managing undernutrition, involving action in a range of sectors to ensure long-term preventative and treatment strategies.<sup>56</sup>

The scale-up of CMAM forms part of the MSNP and trials of treatment through a community-based approach have been carried out in a number of districts with very high success rates.<sup>57</sup> It is planned that by 2017, 35 districts will be able to offer CMAM.<sup>58</sup> Importantly, the MSNP advocates for management of both severe and moderate acute malnutrition to be fully integrated into health services. However, not enough resources are currently devoted to strengthening CMAM. This is impeding its full integration within the health system and the scaling up of treatment.

The Government has recently established a national target to reduce the rate of acute malnutrition in under-fives to 5% by 2017. To reach this target, the Government, donors and civil society organisations in Nepal will need to recognise wasting as a major public health issue, raise it to the top of the political agenda and enhance their commitment and leadership on this question.

Although donors have recently increased the level of nutrition aid for Nepal<sup>59</sup>, there is still only limited funding available for the treatment of acute malnutrition. A 'basket fund' for the MSNP is being established which will receive funding from both the Government and its development partners. This is a key opportunity to ensure an increase in both the overall budget for tackling undernutrition and the funds available for the treatment (and prevention) of acute malnutrition.

## 4. COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION (CMAM) IN SUN COUNTRIES' 'COSTED' PLANS

Through the SUN Movement, many countries are being supported to develop 'costed' national nutrition plans. These plans are either an adapted version of an existing nutrition plan or the result of a new planning and costing exercise supported by donors and the SUN Secretariat. They are therefore a useful indicator of which areas are currently being prioritised by governments. An analysis of 13 SUN countries which have a high-burden of acute malnutrition and which provided information on spending plans reveals that the amount allocated each year to CMAM is on average \$14.7 million (per country). However, when two higher spending countries are removed from the list (Kenya and Yemen), the average annual planned spend for the 11 remaining countries falls to just \$3.9 million.<sup>51</sup> So, there is clearly still a significant budgetary shortfall when it comes to CMAM. One of the reasons may be the fact that CMAM is still seen as an external, donor-funded activity or a purely emergency activity that will be funded by donors. There is therefore a need to ensure that - as the national plans get rolled out and fully funded - adequate funding is provided for CMAM from the government's own domestic resources.





## 5. THE IMPORTANCE OF A BROAD-BASED APPROACH TO PREVENTION

Brazil provides a positive example of what can be achieved by a coordinated, national drive to tackle the underlying causes of undernutrition. Social welfare programmes such as *Bolsa Família* succeeded because they were explicitly multi-sectoral in nature, seeking to simultaneously improve children's diets, their access to education and health services and the financial status of poor families. These have been combined with other aspects of the national *Fome Zero* (Zero Hunger) initiative that were focused on supporting smallholder agriculture.

Examples exist elsewhere of other successful prevention strategies, such as the Bangladeshi Government's promotion of exclusive breastfeeding in the first six months of a child's life. As a result of these efforts rates of exclusive breastfeeding in Bangladesh grew from 46% in 1999-2000 to 64% in 2011.<sup>60</sup>

**PRIMARY SCHOOL PUPIL  
SHUMINA HAMISI DRINKS  
CLEAN WATER FROM A WELL  
IN BAGOMOYO, TANZANIA.**

Courtesy of Daniel Hayduk/RESULTS UK.









A WOMAN WORKS THE LAND  
IN KAEDI, MAURITANIA.

Courtesy of François le Noir /ACF.

**Nutrition-specific (or direct) interventions** target the immediate causes of undernutrition: inadequate dietary intake and disease. Examples include: folic acid supplementation for pregnant mothers, multiple micronutrient supplementation for mothers, exclusive breastfeeding in the first six months of a child's life, appropriate complementary feeding, vitamin A supplementation for children aged 6 to 59 months, and the treatment of SAM. Strong evidence exists regarding the effectiveness of these interventions. The Lancet's 2013 series on undernutrition stated that scaling up a package of 10 nutrition-specific interventions to 90% coverage in 34 high-burden countries had the potential to reduce child mortality by 15%, stunting by 20% and severe acute malnutrition by 61%.<sup>61</sup>

**Nutrition-sensitive (or indirect) interventions** seek to address the basic and underlying causes of undernutrition. These interventions, in sectors such as agriculture, welfare and water and sanitation, are important complements to nutrition-specific interventions, which can only go so far in addressing the problem. For example, smallholder agriculture has the potential to contribute to better nutrition through measures such as home gardens, small-scale livestock production, crop diversification, education and awareness-raising, and through empowering women farmers.<sup>62</sup> Social protection programmes implemented at the appropriate time of year have been shown to be effective nutrition-sensitive interventions.<sup>63</sup> They can help to address seasonal food shortages and disease outbreaks, which are two important causes of 'peaks' in acute malnutrition cases at certain times of the year. Access to clean water and the provision of basic sanitation, associated with appropriate hygiene practice, are also core components of any prevention programme tackling acute malnutrition. WASH interventions most likely to have a positive measurable impact on nutrition outcomes are those relating to improving water quality and hygiene facilities and practices.<sup>64</sup>

## 6. DEVELOPING NEW APPROACHES ON MODERATE ACUTE MALNUTRITION

Progress in the treatment of moderate acute malnutrition (MAM) has not gathered the same momentum as that of SAM management. The standard way in which MAM is treated is through supplementary feeding programmes.<sup>65</sup> However, these have not always been effective, with high drop-out rates. Many hold the view that these programmes are not sustainable as a national strategy for government and therefore should not be systematised within the CMAM approach; they should rather be implemented on a case-by-case basis, depending on the context, usually within a crisis situation. Alternative models, including the use of cash transfers, are being piloted successfully in many countries and deserve more support. In stable contexts, there is need to invest more in preventing MAM through improved nutrition-sensitive programming in areas such as WASH and agriculture.

Although MAM does not pose as high a risk to life as SAM, the impact of not treating MAM on child survival is still significant. This is due to its contribution to deaths from infectious diseases and the large number of children affected – 35 million according to the joint UN and World Bank estimate. Moreover, every child with severe acute malnutrition at one time suffered from moderate acute malnutrition. Identifying and treating these children earlier to prevent deterioration into a more life-threatening condition should therefore be a priority.

## 7. IMPROVING UN AGENCIES' COORDINATION

Currently, global leadership for efforts to treat moderate and severe acute malnutrition is split between three UN agencies: UNICEF is in the lead for outpatient SAM treatment; WHO for in-patient SAM treatment; and the World Food Programme (WFP) for MAM treatment. Although this should not in theory prevent a joined-up approach from being adopted, in practice it has reinforced the tendency for governments to develop separate treatment avenues for MAM and SAM (because each UN agency only gives advice, programmatic support and funding for its particular area).<sup>66</sup> The artificial divide between MAM and SAM treatment must therefore be addressed. As a minimum, the UN agencies involved should agree on a joint strategy for tackling the condition in all its forms.

## CONCLUSIONS

**GOVERNMENTS CANNOT IGNORE** a situation where 52 million children under the age of five are acutely malnourished. Countries have a moral and legal obligation – in the shape of the Convention on the Rights of the Child – to prevent children becoming malnourished in the first place and to take all the necessary steps to treat children who fall victim to this condition.

Based on the analysis contained in the report, we set out below a 10-point plan for tackling acute malnutrition. These steps would take us closer to achieving the goal of the Generation Nutrition campaign: to end under-five deaths from the condition. Our recommendations mainly target Northern donors and governments in high-burden countries. However, we believe they are also important for other all stakeholders working on nutrition (NGOs, other civil society organisations, the private sector, etc.).

## 10-POINT PLAN

### FOR TACKLING ACUTE MALNUTRITION IN UNDER-FIVES

#### We call on governments and other relevant stakeholders to:

- 1 **RECOGNISE ACUTE MALNUTRITION AS A LEADING CAUSE OF CHILD DEATH.**  
25 years on from the signing of the UN Convention on the Rights of the Child, states should reaffirm the commitment they made in the text to enable every child to enjoy the “highest attainable standard of health” and “to combat disease and malnutrition”. Tackling acute malnutrition should be made a central part of ongoing government efforts to reduce child mortality.
- 2 **FULLY ACKNOWLEDGE THAT ACUTE MALNUTRITION IS AN ‘EVERYDAY EMERGENCY’ BY INCLUDING TREATMENT AND PREVENTION IN LONG-TERM HEALTH AND DEVELOPMENT PROGRAMMES.**  
While acute malnutrition is generally associated with humanitarian crises and famines, most of the children suffering from acute malnutrition live in stable, development settings. Donors and governments in affected countries must ensure that from now on the prevention and treatment of acute malnutrition are also embedded in long-term health and development programmes and are adequately funded (see also point 5 below).
- 3 **INTEGRATE CMAM INTO CHILD HEALTH SERVICES AND INCREASE COVERAGE FOR THE TREATMENT OF SEVERE ACUTE MALNUTRITION.**  
As a first step towards ensuring universal coverage, countries with high rates of acute malnutrition must ensure that the community-based management of acute malnutrition (CMAM) is properly integrated into national health services. To break the ‘vicious circle’ of acute malnutrition and infectious disease, greater efforts must be made to combine the diagnosis and treatment of acute malnutrition with interventions available for malaria, tuberculosis, diarrhoea and pneumonia.
- 4 **STRENGTHEN HEALTH SYSTEMS TO ENABLE LONG-TERM EXPANSION AND AFFORDABILITY OF CMAM AND OTHER HEALTH INTERVENTIONS.**  
Integrating CMAM into health care services needs to be accompanied by a strengthening of these services overall. National governments, with the support of the international community, should prioritise health system strengthening, with the aim of making services more affordable/free of charge, effective and widely available in different parts of the country.
- 5 **DONORS TO INCREASE LONG-TERM FUNDING FOR THE PREVENTION AND TREATMENT OF ACUTE MALNUTRITION AND (IN NON-CRISIS SITUATIONS) MOVE AWAY FROM SHORT-TERM EMERGENCY FUNDING MECHANISMS.**  
In the case of acute malnutrition, most external funding for CMAM continues to be in the form of humanitarian aid and there is little funding dedicated to prevention programmes targeting children under five. International donors

The plight of 52 million children who suffer the effects of acute malnutrition each year – as well as the one million amongst them that tragically do not survive the severest form of the condition – must be addressed. Acute malnutrition is an everyday emergency that requires urgent action. It is time for the international community, national governments and civil society to take action on a problem we know how to solve. If we act now, we can end child deaths from acute malnutrition.



should scale up their funding for both the treatment and prevention of acute malnutrition through long-term funding mechanisms which support the implementation of SUN countries' 'costed' national plans.

- 6 ESTABLISH NATIONAL WASTING TARGETS TO HELP FOCUS EFFORTS ON TACKLING ACUTE MALNUTRITION.**  
 In 2012, the World Health Organisation (WHO) agreed a global plan on nutrition which included a target for reducing the global rate of acute malnutrition to below 5% by 2025. Building on this, all high-burden countries should now establish national wasting targets, which would help focus domestic attention on this task and help ensure a joined-up effort across a range of sectors.
- 7 ADDRESS ACUTE MALNUTRITION IN THE POST-2015 DEVELOPMENT FRAMEWORK.**  
 A specific target on wasting should be included within the post-2015 development framework, as part of a broader goal on nutrition or food and nutrition security. The target should go beyond the ambition of the 2025 WHA target, committing states to a more significant reduction in the rates of acute malnutrition and setting them on a clear path towards ending under-five deaths from the condition. Furthermore, the targets and indicators in other goal areas should be designed in a way that helps accelerate progress in tackling undernutrition.
- 8 SUPPORT MORE RESEARCH ON THE RELATIONSHIP BETWEEN WASTING AND STUNTING AND ALSO ON THE OTHER LONG-TERM HEALTH EFFECTS OF WASTING.**  
 We know that there is a causal link between wasting and stunting (for example bouts of acute malnutrition can contribute to stunting) but this area is still not fully understood by academia or development actors. Similarly, there has been little research conducted into the various effects in later life of an episode of acute malnutrition in childhood. Governments should therefore prioritise the funding of more research on these two themes. This would help in the design of more effective prevention programmes.
- 9 DEVELOP NEW WAYS TO TACKLE MODERATE ACUTE MALNUTRITION.**  
 It would probably be too costly to scale up supplementary feeding programmes to a national level and there are doubts about their effectiveness (they are probably best suited to crisis situations). Alternative models, including the use of cash-based approaches, are being piloted and should be supported. In general, there is a need to invest more in the prevention of MAM through cross-sectoral initiatives and improved nutrition-sensitive programming.
- 10 ENSURE THAT THERE IS A COORDINATED STRATEGY BY UN AGENCIES ON ACUTE MALNUTRITION.**  
 At present three different UN agencies are involved in efforts to tackle acute malnutrition (UNICEF, WHO and World Food Programme). This has tended to reinforce a silo approach in relation to SAM and MAM at the national level. These barriers should be broken down, with the development of a coordinated strategy by UN agencies on the issue.



## END NOTES

<sup>1</sup> UNICEF-WHO-The World Bank, *Joint Child Malnutrition Estimates: Levels and Trends in Child Malnutrition*, UNICEF, WHO, World Bank, 2012; statistical table. Figures are for 2011. [http://www.who.int/nutgrowthdb/statistical\\_tables.pdf](http://www.who.int/nutgrowthdb/statistical_tables.pdf)

<sup>2</sup> Cf. [www.scalingupnutrition.org](http://www.scalingupnutrition.org) for more information about the SUN Movement. 50 developing countries are now participating in this initiative.

<sup>3</sup> *Nutrition for Growth Commitments: Executive Summary*, UK Department for International Development (DFID), 2013. \$2.9 billion of the \$4.15 bn. is core funding. The remaining \$1.25 bn. will be secured through matched funding.

<sup>4</sup> UNICEF-WHO-The World Bank, *Joint Child Malnutrition Estimates: Levels and Trends in Child Malnutrition*, UNICEF, WHO, World Bank, 2012; statistical table.

<sup>5</sup> P.13, *Global SAM Management Update: Summary of Findings*, UNICEF, 2013

<sup>6</sup> To get involved in the campaign, please visit [www.generation-nutrition.org](http://www.generation-nutrition.org)

<sup>7</sup> P.2, *Committing to Child Survival: A Promise Renewed*, UNICEF brochure, 2012. The definition of a low national rate is below 20 deaths per 1,000 live births. [http://www.apromiserenewed.org/files/APR\\_Brochure\\_September12.pdf](http://www.apromiserenewed.org/files/APR_Brochure_September12.pdf)

<sup>8</sup> Here a lack of food relates both to the quantity of food available as well as the quality of a person's diet.

<sup>9</sup> Severe acute malnutrition can also kill on its own, without an associated disease. When no food is available the body survives by relying on its own reserves of energy (which explains the wasting process) but this cannot last for more than a few weeks and at this stage - if there is no intervention - the person will die from organ failure.

<sup>10</sup> SAM is defined by very low weight-for-height (below -3 Z scores of the median WHO growth standards), by a low mid-upper arm circumference (MUAC <115 mm) and/or the presence of nutritional oedema (swelling in a person's legs). MAM is defined by low weight for height (between -2 and -3 Z scores of the median WHO growth standards) or by low mid upper arm circumference (MUAC between 115 and 120 mm).

<sup>11</sup> P.247, "Maternal and child undernutrition: global and regional exposures and health consequences" Black, R. E., Allen, L. H., Bhutta, Z. A., Caulfield, L. E., de Onis, M., Ezziati, M., Mathers, C., Rivera, J., *The Lancet*, Vol. 371, Issue 9608, pp. 243-260, Jan 2008.

<sup>12</sup> Stunting also carries an increased risk of dying for children, in addition to its debilitating - and irreversible - effects on a child's growth and long-term development. Regarding the duration of acute malnutrition, it should be noted that an episode of moderate acute malnutrition can last for several months, especially if the child does not receive treatment.

<sup>13</sup> For more on the link between undernutrition and diseases in adulthood, see "Fetal and early childhood undernutrition, mortality, and lifelong health", Lutter, C.K., Lutter R., *Science*, Vol. 337, Issue 6101, pp.1495-9, 2012 and "Early nutrition and risk of disease in the adult", Caballero, B., *Public Health Nutrition*, Vol. 4, Issue 6A, pp.1335-6, 2001.

<sup>14</sup> P. 4, *Improving child nutrition: the achievable imperative for global progress*, UNICEF 2013

<sup>15</sup> Analysis of Demographic and Health Survey data shows that DRC, Ethiopia, India, Nepal, Niger and Nigeria experience high levels of both acute and chronic malnutrition. Cf. "Program responses to acute and chronic malnutrition: Divergences and Convergences", Bergeron G. and Castleman T., in *Advances in Nutrition*, Vol. 3, pp. 242-9, 2012

<sup>16</sup> Cf. "Wasting Is Associated with Stunting in Early Childhood", Richard, S.A. et al, *Journal of Nutrition*, Vol. 142, pp. 1291-1296, 2012.



<sup>17</sup> A correction factor of 1.6 is often used to calculate incidence (hence burden = prevalence x 1.6). For an explanation of this method, cf. p. 6, *Global SAM Management Update: Summary of Findings*, UNICEF, 2013

<sup>18</sup> P. 13, *ibid*. For the Joint Estimates figure of 17 million, see UNICEF-WHO-World Bank Child Malnutrition Dashboard, [http://www.childinfo.org/malnutrition\\_dashboard.html](http://www.childinfo.org/malnutrition_dashboard.html) (accessed in November 2013).

<sup>19</sup> [http://www.childinfo.org/malnutrition\\_dashboard.html](http://www.childinfo.org/malnutrition_dashboard.html) Figures quoted are for 2011.

<sup>20</sup> This method of ranking means that countries with very high rates of acute malnutrition but small populations are not represented here. The figures are based on prevalence data only from the UN joint estimates, as data including incidence is not currently available for SAM and MAM.

<sup>21</sup> The figures for the number of children under-five affected (the 'burden') are calculated by multiplying the under-five population of the country by the relevant percentage of under-fives with wasting (e.g. for India: 124,117,411 x 0.20). These percentages come from national surveys of wasting prevalence for under-fives conducted in the year indicated in the table (the most recent year available on the WHO database).

<sup>22</sup> [http://www.who.int/entity/nutgrowthdb/jme\\_master2013.xlsx](http://www.who.int/entity/nutgrowthdb/jme_master2013.xlsx)

<sup>23</sup> This exceeds the WHO 'emergency threshold' of 10%, which is considered alongside contextual issues when defining a humanitarian crisis. cf. WHO Emergency Decision Tree: <http://www.unicef.org/nutrition/training/2.2/14.html>

<sup>24</sup> *Joint Statement on Community-based Management of Severe Acute Malnutrition*, WHO, WFP, UN Standing Committee on Nutrition, UNICEF, 2007. This figure is the best estimate available of annual under-five deaths due to SAM because it also factors in incidence.

<sup>25</sup> "Ending Undernutrition: Our Legacy to the Post 2015 Generation", paper by Lawrence Haddad, Institute of Development Studies, written in partnership with the Children's Investment Fund Foundation, May 2013

<sup>26</sup> UNICEF-WHO-The World Bank, *Joint Child Malnutrition Estimates:*

*Levels and Trends in Child Malnutrition*, UNICEF, WHO, World Bank, 2012; statistical table. Between 1990 and 2011 the global rate of acute malnutrition fell much more slowly than for other types of undernutrition: stunting was reduced by 35%, underweight by 36%, but wasting fell by only 11%.

<sup>27</sup> For example, "between 2000 and 2012, a scale-up of malaria interventions saved an estimated 3.3 million lives. 90%, or 3 million, of these are in the under-five age group in sub-Saharan Africa." *Factsheet on World Malaria Report 2013*, WHO, accessed at: [http://www.who.int/malaria/media/world\\_malaria\\_report\\_2013/en/](http://www.who.int/malaria/media/world_malaria_report_2013/en/)

<sup>28</sup> *Committing to Child Survival: A Promise Renewed*. UNICEF brochure, 2012

<sup>29</sup> This is for Ministry of Health-integrated programmes. Is community-based treatment of SAM at scale capable of meeting global needs? Guerrero, S. and Rogers, E., *Access for All*, Vol.1, Coverage Monitoring Network, June 2013

<sup>30</sup> Assuming a coverage rate of 90%, the number of lives saved due to SAM treatment would be 350,000 and the number saved due to MAM treatment would be 85,000, making a total of 435,000 lives saved. The figures were calculated for one year (2012), based on data available for 2011. pp. 467 and 469, "Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?" Bhutta, Z. A., Das, J. K., Rizvi, A., Gaffey, M. F., Walker, N., Horton, S., Webb, P., Lartey, A., Black, R. E., *The Lancet*, Vol. 382, Issue 9890, pp.452-77, 2013

<sup>31</sup> Two recent studies have calculated the cost-effectiveness of CMAM. One from Malawi estimated the cost at \$42 per DALY averted. The other, conducted in Lusaka, Zambia, estimated it at \$53 per DALY averted. P.133, "Cost-effectiveness of community based management of acute malnutrition in Malawi", Walker, D. G., Golden, K., & Wilford, R., *Health Policy and Planning*, Vol. 27, Issue 2, pp.127-137, 2012, first published online March 4, 2011. "Cost-effectiveness of community-based therapeutic care for children with severe acute malnutrition in Zambia: decision tree model", Bachmann M., *Cost Effectiveness and Resource Allocation*, Vol. 7, Issue 2, 2009. Regarding the comparison with the cost



## CHILDREN IN A HEALTH CENTRE IN KAEDI, MAURITIANA.

Courtesy of François le Noir /ACF.

of other child survival interventions, see also "Cost-effectiveness analysis of strategies for child health in developing countries", Tan-Torres Edejer, T. et al, *British Medical Journal*, Vol. 331, Issue 1177, 2005.

<sup>32</sup> P.8, *Global SAM Management Update: Summary of Findings*, UNICEF, 2013

<sup>33</sup> p.9, *ibid*

<sup>34</sup> "An Essential Health Package in a low-income country consists of a limited list of public health and clinical interventions which will be provided at primary and/or secondary level care." "Essential Health Packages: What Are They for? What Do They Change?" WHO Service Delivery Seminar Series, Draft Technical Brief No. 2, WHO, July 2008 [http://www.who.int/healthsystems/topics/delivery/technical\\_brief\\_ehp.pdf](http://www.who.int/healthsystems/topics/delivery/technical_brief_ehp.pdf)

<sup>35</sup> Data used for Table VI, p.17, *Global SAM Management Update: Summary of Findings*, UNICEF, 2013

<sup>36</sup> P.17, *ibid*.

<sup>37</sup> P.8, What factors influence access to community-based treatment of severe acute malnutrition? Puett, C., Hauenstein Swan, S., & Guerrero, S., *Access for All*, Volume 2, Coverage Monitoring Network, 2013

<sup>38</sup> p. 7, *ibid*

<sup>39</sup> Demographic health survey, National Institute of Statistics and Demographics, Macro Int., Burkina Faso 2010.

<sup>40</sup> SMART National nutritional survey, Ministry of Health, Burkina Faso, 2013

<sup>41</sup> Assessment of humanitarian needs in Burkina Faso, OCHA, November 2013

<sup>42</sup> According to the report of the monitoring system, the impact of the shocks on the nutritional and food situation, ACF listening post, ACF, 2013

<sup>43</sup> NCA and SQUEAC reports, ACF, 2012-13

<sup>44</sup> 22,017 inhabitants/1 doctor and 5056 inhabitants/1 nurse in the State in 2011 (Source: Statistical Handbook, Ministry of Health, 2011)

<sup>45</sup> "The term integrated community case management (or ICCM) generally refers to an integrated approach for assessing and classifying signs and symptoms of pneumonia, diarrhoea, and malaria in children under five years old, and providing home-based treatment or referral for these diseases. The approach also normally includes health promotion and preventive activities such as sleeping under a net and hand washing. This care is provided by volunteers in the community who are trained by health workers on the ICCM approach." P. 2, Integrating Severe Acute Malnutrition into the Management of Childhood Diseases at Community Level in South Sudan, Learning Paper, Malaria Consortium, 2013

<sup>46</sup> p.7, *Aid for nutrition: Are we on-track to meet the needs? 2010 and 2011*, ACF, 2013 'Basic nutrition' is one of the reporting codes used on the OECD Development Assistance Committee's Creditor Reporting System (CRS) database. The category covers aid for "direct feeding programmes (maternal feeding, breastfeeding, and weaning foods, child feeding, school feeding); determination of micronutrient deficiencies; provision of vitamin A, iodine, iron etc.; monitoring of nutritional status; nutrition and food hygiene education; household food security." Quoted from OECD website, list of reporting codes for aid to health, accessed at: <http://www.oecd.org/dac/stats/aidtohealth.htm>

<sup>47</sup> Cf. *Nutrition for Growth Commitments: Executive Summary*, accessed at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/207274/nutrition-for-growth-commitments.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/207274/nutrition-for-growth-commitments.pdf)

<sup>48</sup> P.452, *Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?* Bhutta, Z. A. et al, *The Lancet*, 382(9890):452-77,2013

<sup>49</sup> p.14, *The management of acute malnutrition at scale: A review of donor and government financing arrangements*, Humanitarian Practice Network, Network Paper 75, Shoham, J., Dolan, C. and Gostelow, L., Emergency Nutrition Network, ODI, May 2013

<sup>50</sup> p. 7, *ibid*.

<sup>51</sup> The figures for individual countries are: Bangladesh - \$2.14m; Benin - \$1.02m; Burkina Faso - \$5.4m; Haiti - \$0.38m; Kenya - \$72.8m; Madagascar - \$5.79m; Malawi - \$10.71m; Nepal - \$2.61m; Niger - \$6.92m; Sierra Leone - \$7.07m; The Gambia - \$0.24m; Uganda - \$0.61m; Yemen - \$75.77m. No figures were available for Senegal, Indonesia, Tanzania or Mozambique. All these countries have rates of under-five wasting of above 5%. Source: authors' own calculations based on background data supplied by SUN Secretariat. For the summary report on the costed plans, cf. *Analysis of the costs of SUN country plans report of June 2013*, accessed at: <http://scalingupnutrition.org/about/financial-tracking-resource-mobilization>

<sup>52</sup> *Nepal Demographic and Health Survey*, Nepalese Ministry of Health and Population, New ERA, ICF International Inc., 2011. This national rate masks wide variations within regions. The most severely affected are the hilly and mountainous regions.

<sup>53</sup> According to the *Child Health Division/UNICEF Nepal*, the total number of admissions in 2012-2013 was approximately 11 000, out of 91 000 cases of SAM.

<sup>54</sup> p. 36 *Nepal Demographic and Health Survey*, Nepalese Ministry of Health and Population, New ERA and ICF International Inc., 2011

<sup>55</sup> p.39, *ibid*.

<sup>56</sup> p.24, *Multi-Sectoral Nutrition Plan*, National Planning Commission, 2012. In the plan, the Government states that it 'is now aware that nutrition is not only a humanitarian issue, but also the right of children, women and society at large as well as an investment of critical importance for the development of human capital.'

<sup>57</sup> Average programme outcomes for the six trial districts were superior to SPHERE minimum standards. Recovery rates in the programs in 2013 were 88% compared to the SPHERE standard of 75%, defaulter rates 6.6% compared to the SPHERE standard of 15%, and death rates of just 0.4% compared to the SPHERE standard of 10%. *Child Health Division programme outcomes for 2009 to 2013*, presented by Giri Raj Subedi, Chief, Nutrition Section, Child Health Division, March 2014

<sup>58</sup> *Multi-Sectoral Nutrition Plan Nepal*, National Planning Commission, 2012

<sup>59</sup> According to figures published by *Scaling Up Nutrition movement*, donor nutrition aid increased from US\$ 200,000 in 2011 to US\$ 5 million by 2013.

<sup>60</sup> Rates of exclusive breastfeeding in the first six months grew from 46% in 1999-2000 to 64% in 2011. P.56, *Improving Child Nutrition: The Achievable Imperative for Global Progress*, UNICEF, 2013.

<sup>61</sup> P.468, *Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?* Bhutta, Z. A. et al, *Lancet*. 382(9890):452-77, 2013

<sup>62</sup> Cf. *Small scale, big impact: Smallholder agriculture's contribution to better nutrition*, briefing paper, UK Hunger Alliance, 2013.

<sup>63</sup> Cf. *Improving nutrition through multisectoral approaches: social Protection*, brief by World Bank, Rapid Social Response, DFID and Government of Japan, 2013.

<sup>64</sup> "Interventions to improve water quality and supply, sanitation and hygiene practices, and their effects on the nutritional status of children", Dangour A.D., Watson L., Cumming O., Boisson S., Che Y., Velleman Y., Cavill S., Allen E., Uauy R., *Cochrane Database of Systematic Reviews* 2013, Issue 8, Article No. CD009382.

<sup>65</sup> The WHO defines supplementary feeding programmes as "the provision of extra food to children or families beyond the normal ration of their home diets, [it] can take place in the home, feeding centres, health-care centres and schools." Cf. WHO website: [http://www.who.int/elena/titles/child\\_growth/en/](http://www.who.int/elena/titles/child_growth/en/) (Accessed in March 2014).

<sup>66</sup> Cf. pp.17-19, *The management of acute malnutrition at scale: A review of donor and government financing arrangements*, Humanitarian Practice Network, Network Paper 75, Shoham, J., Dolan, C. and Gostelow, L., Emergency Nutrition Network, ODI, May 2013

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