Meeting the U.N.’s Millennium Development Goals for nutrition: Prospects, Challenges and the Role of UNICEF

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Key issues in this talk

- How MDGs and nutrition relate
- Why reducing undernutrition is essential to poverty reduction
- Understanding undernutrition
- What we (can) do to improve the situation

- How UNICEF works in addressing undernutrition
- Are we making an impact?
- Challenges and future direction
- Q & A
UNICEF

- Active in 190 countries – programmes in ~150
- ~11,000 staff - 88% in the field
- 8 Regional Offices
- Research centre in Florence, a supply operation in Copenhagen and offices in Geneva, Tokyo and Brussels
- UNICEF headquarters in New York
- 2010 budget $3.5 billion – NYFD $3.8 billion
- Staff with focus on nutrition - ~370 and growing
- Governed by a board, driven by medium term strategic plan – following MDG framework
UNICEF strategic areas

- Young child survival and development
  - Health, nutrition, early childhood development, and water sanitation, hygiene
- Basic education and gender equality
- HIV/AIDS and children
- Child protection
- Policy analysis, advocacy and partnerships for children’s rights
- Cross cutting: emergencies, equity and MDGs
## Nutrition and the MDGs

<table>
<thead>
<tr>
<th>Goal</th>
<th>Nutrition Effect</th>
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<tbody>
<tr>
<td>Goal 1: Poverty and hunger</td>
<td>Malnutrition erodes human capital; irreversible and intergenerational effects on cognitive and physical development $\rightarrow$ income loss due to inadequate nutrition - 2-3% of GDP</td>
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<tr>
<td>Goal 2: Universal primary education</td>
<td>Malnutrition affects cognitive function $\rightarrow$ school enrollment, performance, dropout</td>
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<td>Goal 3: Gender equality</td>
<td>Addressing malnutrition empowers women more than men</td>
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<tr>
<td>Goal 4: Child mortality</td>
<td>Malnutrition underlies $&gt; \text{one third of all child deaths}$</td>
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<td>Goal 5: Maternal health</td>
<td>Maternal health and mortality compromised by malnutrition $\rightarrow$ 20% mortality due to anemia</td>
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<tr>
<td>Goal 6: HIV/AIDs, Malaria…</td>
<td>Malnutrition may increase risk of HIV, hastens onset of AIDs,</td>
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</table>
MDG 1: Eradicate extreme poverty and hunger

• Target 1a: Reduce by half the proportion of people living on less than a dollar a day
• Target 1b: Achieve full and productive employment and decent work for all, including women and young people
• Target 1c: Reduce by half the proportion of people who suffer from hunger
  • 1.8 Prevalence of underweight children under-five years of age
  • 1.9 Proportion of population below minimum level of dietary energy consumption
MDG 1: Eradicate extreme poverty and hunger - terminology

- Hunger – a feeling of discomfort or weakness caused by lack of food, coupled with the desire to eat

- Undernutrition – insufficient food intake and repeated infectious diseases leading to underweight for one’s age, too short for one’s age (stunted), dangerously thin for one’s height (wasted) and deficient in vitamins and minerals (micronutrient malnutrition)

- Malnutrition – broad term commonly used as alternative to undernutrition but technically also refers to overnutrition
Reduce by half the proportion of people who suffer from hunger

Prevalence of underweight children under-five
• Weight for height – wasting, acute undernutrition
• Height for age – stunting, chronic undernutrition
• Weight for age – underweight → includes both forms and therefore not sensitive enough
• UNICEF focuses on acute and chronic undernutrition

Proportion of population below minimum level of dietary energy consumption
• Food production – availability rather than intake
Causal pathways in undernutrition, UNICEF 1991

Nutrition ≠ Food security
Under 5 Mortality has fallen below 9 million
Wasting prevalence is at emergency levels in many African and Asian countries.

Stunting affects approximately 183 million under-fives in the developing world; about one in three.
Micronutrient deficiencies

- Inter-related with stunting and wasting
- > 1 billion anemic, > 190 million children are vit A deficient, ~ 2 billion iodine deficient → annually 42 million newborns sub-optimal brain development
- Important for survival and development
  - Vitamin A (6-59m) supplementation ~24% mortality risk reduction
  - Therapeutic zinc (<5 years): more rapid recovery diarrhea, 5% mortality risk reduction
  - Maternal micronutrients (iron, folate, vit A…): birth outcomes, maternal status, child growth & development
  - Iron – loss in productivity: 5% blue collar workers; 17% heavy manual laborers; iodine – 10-15 % IQ
The network of connections is less dense!

Switzerland: Deaf-mutes in special schools 1915-1932

Source: Hans Burgi, ICCIDDMember and Past President, Fluorine-Iodine Commission of the Swiss Academy of the Medical Sciences
Impact of undernutrition

• Damage done in the early period of life is irreversible

• Increased risk of dying from infectious diseases (1.4 to 1.6 times)

• Stunting is associated with reduced school performance equivalent to 2-3 years of schooling

• Stunting associated with reduced income earning capacity (22% average; up to 45% has been reported!)

• Increased risk of non-communicable diseases in adult life

• Stunted girl is more likely to give birth to undernourished baby

• Reduced GDP by 2-3%

• About 20 million children suffer from severe acute malnutrition which greatly increased risk of death
Inter-generational Cycle of Undernutrition

The cycle of poor nutrition perpetuates itself across generations - supported by scientific evidence

Childhood: Child growth failure, impaired mental development

Fetal and Infant stages: Low birthweight baby

Pregnancy: Compromised nutritional status

Adult: Small adult woman, lowered productivity

Adolescents: Low weight and height

Fetal and Infant stages: Low birthweight baby
The essence of stunting & underweight reduction, and also important for preventing acute malnutrition!
Scaling Up Nutrition Implications for UNICEF

unite for children
what we do & how
UNICEF approach nutrition action

• Scaling up evidence-based cost-effective interventions to prevent and treat undernutrition with priority to the window of opportunity: pre-pregnancy to child < 2 years

• Stunting is complex requiring an integrated, multi-sectoral approach, both nutrition sensitive and specific interventions:
  – Improved dietary quality (improved feeding and breastfeeding practices, improved micronutrient intakes)
  – Link with food security and social protection
  – Clean drinking water, hygiene and environmental sanitation
  – Health services (preventive and curative)
  – Women’s empowerment
  – Women’s and girls education
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Developing country data based on SOWC 2012; * based on estimation
Role UNICEF

Upstream
• advocacy and policy – global and national

Downstream
• programme implementation - through partners
• convening and coordinating
• capacity building

Monitoring situation of children and women, measuring and documenting results
How we work – country context

- donor
- academia
- media
- government
- families
- health system
- civil society
- NGOs
- private sector
- other UN
- UNICEF
- private sector
- UN
- media
- health system
- NGOs
- families
- UN
- government
- academia
- donor
- private sector
- NGOs
- health system
- media
- families
- academia
- government
- donor
- UN
- government
- UN
Operational factors

• National policy, ownership and stakeholder consensus
• Required resources: $, skills, staff – build capacity
• Demand/acceptability among target population eg iron folic acid, fortified foods
• Programmatic clarity, co-existence with other interventions
• Can it be sustained?
• UNICEF role: link policy with programme implementation with coordination and partnerships
“Nutrition-sensitive programming” -- moving from a narrow “nutrition lens” to a wider “development lens”

Narrow nutrition lens

- Transportation sector
- Financial and credit sector
- Agriculture sector
- Health sector
- Education sector
- Private sector
- Trade and tax policies sector
- Multiple other sectors

Multisectoral nutrition lens

Financing envelope

Presentation at CIDA
Tamar Manuelyan Atinc
Vice President, Human Development Network
The World Bank
December 2010
We know what to do – undernutrition
The REACH intervention areas (WFP, WHO, FAO, UNICEF)

Interventions are proven and known to be effective. The challenge is to scale them up
REACH: Scale assessment identifies existing levels of coverage by intervention and geography

A typical child in Lao PDR receives only ~4 of the interventions it needs

~80% of districts cover less than 25% of population with package of 6+ interventions

Note: Map produced by the NSC, July 2003. Coverage map reflects districts proposed for early implementation of MNCH core package as having full coverage.

Source: Poverty statistics reports, provincial committees/authorities
Public health burden
- Map the problem, magnitude, who is affected, causes

Define public health goal
- Influence decision making, communicate evidence to policy makers, scientists, industry, public

Policy options
- What are the best policy options
- Design of interventions/programmes

Policy applications
- Monitor implementation and impact
- Contribute to the evidence base
- Communicate results to policy makers & other stakeholders

UNICEF’s role in policy formulation and programme implementation
Community based nutrition model

- Supplementary feeding
- In-patient
- Out-patient
- Community mobilization
- Ready to use therapeutic food
- Link with prevention
Community based nutrition

• Early detection of SAM and management
• IYCF Counselling & support to reach the most vulnerable
• Integrated interventions with water, education, health
• Social enabling factors – e.g. community conversation
Humanitarian Situations

- Increase frequency and complexity of humanitarian crisis
- UNICEF responded to a total of 290 humanitarian situations in 98 countries in 2010
- UNICEF aims to provide effective, predictable and programmatic and operational support to humanitarian action
- Building resilience and reducing risks are cornerstones of UNICEF programs
- Humanitarian situations often exacerbate further the nutritional status of young children and women
- Timely scale-up of life saving interventions such as treatment of SAM is key during humanitarian crisis
Management of SAM

• Center based (late detection) $\rightarrow$ home based (early detection in community)
• From high energy milk to F75/F100 and ready to use therapeutic food (RUTF)
Treatment of Severe Acute Malnutrition (# treatments in 2011 - 1.8M)

- East and Southern Africa: 725,000
- West and Central Africa: 887,000
- Asia: 145,000
- Middle East: 36,200
- Latin American: 18,100

Total caseload ~20 million
Key Components of a National IYCF Strategy

- Legislation
  (Code of marketing of BMS
  Maternity protection)

- Skilled support by the health system

- Community-based counselling, support & promotion

- Communication

- Additional complementary feeding components

- IYCF in difficult circumstances
  (HIV, emergency)
Additional complementary feeding components

Improving the quality of CF through **optimal use** of locally available foods

Improving the **availability of high quality local foods** through increasing agricultural production (e.g. homestead production, animal husbandry, etc)

**Provision of supplements** for complementary feeding (MNPs, LNS, fortified complementary foods) in food-insecure populations, and

**social & commercial marketing** of nutrition supplements and foods for complementary feeding in general population, including stimulating local production

**Social protection schemes with nutrition component** - complementary feeding. (e.g. in kind complementary foods, vouchers, cash transfers for the vulnerable families with children 6-24 months)
Home fortification

• Improve the quality of food consumed by children 6-24 months by adding a vitamin powder (MNP) or lipid based spread – developed in 1990’s
• Countries with scaling up MNP programs: >22 countries – 3 with national programmes
• Good impact on anemia and delivered as part of infant and young child feeding programmes
Global procurement micronutrient powders (2007-2010)

Sources: WFP and UNICEF supply division
Note: does not include NGO procurement and direct procurement from supplier
results?
Key developments

• High level commitment, more interest, more funding – SUN – global, national
• Increased attention for chronic undernutrition
• Integrated approach – e.g. REACH
• Improved approaches
  • Community based management acute malnutrition & development of ready to use therapeutic food
  • Home fortification
  • Delivery and communication science
  • Private sector role expanded
• New partnerships, better complementarity
Changed perspectives on Nutrition

- Changed perspectives due to science, economic data, food crisis, emergencies, Scaling Up Nutrition (SUN)
  - Formation of Secretary General’s high level task on force food security and nutrition
  - Changed nutrition policies (eg EU, Ireland, US)
  - Increased investment (eg EU, CIDA, DFID, US…)
  - Proposed change in global nutrition architecture (building on SUN, improving level of engagement among key stakeholders)
- High expectations to achieve results, and demonstrate a reduction in stunting
- Early Risers…
<table>
<thead>
<tr>
<th>SUN Early risers</th>
<th>REACH</th>
<th>High stunting levels (&gt;44%)</th>
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<tr>
<td>Bangladesh</td>
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<td>Afghanistan</td>
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<td>Burkina Faso</td>
<td>Ethiopia</td>
<td>Timur Leste</td>
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<td>The Gambia</td>
<td>Ghana</td>
<td>Burundi</td>
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<td>Ghana</td>
<td>Lao PDR</td>
<td>Yemen</td>
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<td>Guatemala</td>
<td>Mali</td>
<td>Ethiopia</td>
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<td>Lao PDR</td>
<td>Mauritania</td>
<td>Madagascar</td>
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<td>Malawi</td>
<td>Mozambique</td>
<td>Nepal</td>
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<td>Mauritania</td>
<td>Rwanda</td>
<td>India</td>
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<td>Mozambique</td>
<td>Sierra Leone</td>
<td>Lao PDR</td>
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<td>Namibia</td>
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<td>Zimbabwe</td>
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# Nutrition interventions and their coverage rates

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<thead>
<tr>
<th>Phase</th>
<th>Interventions</th>
<th>Coverage Rates</th>
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<tbody>
<tr>
<td>Pregnancy</td>
<td>Iron &amp; folic acid supplements, Multi micronutrient supplementation, Iodized salt, Food supplements</td>
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<tr>
<td></td>
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<td>71%</td>
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<td>Birth</td>
<td>Initiation of breastfeeding within 1 hr (Colostrum)</td>
<td>43%</td>
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<td>0-6 months</td>
<td>Exclusive breastfeeding, Implementation Code on marketing infant formula</td>
<td>37%</td>
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<tr>
<td></td>
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<td>100 countries</td>
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<tr>
<td>6-24 months</td>
<td>Introduction of complementary feeding, Continued Breastfeeding up to 1 yr, Multi micronutrient supplementation, Vitamin A supplementation (&amp; de-worming), Zinc supplementation, Treatment of severe malnutrition, Treatment of moderate malnutrition, Social safety net programmes</td>
<td>60%</td>
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<td>75%</td>
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<td>20 countries</td>
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<td>66%</td>
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<td>&lt;10%*</td>
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<tr>
<td>24-60 months</td>
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Developing country data based on SOWC 2012; * based on estimation
Can it be done?

Stunting reduction at scale: presence of community based systems

• Nepal: between 2006 and 2011 stunting decreased from 49% to 41% (Nepal DHS)
• Rwanda: between 2005 and 2010 stunting reduced from 51% to 44% (DHS).
• Ethiopia: between 2005 and 2010 stunting reduced from 52.2% to 44.4% (DHS)
• Peru: 54% to 37% from 2000 to 2004 (subnational among 75000 children).
• Brazil
Prevalence of stunting among children under age 5, by income quintile, Brazil, 1989, 1996 and 2007 (%)

Source: Monteiro and others 2010.
Trends in stunting prevalence among under-five children
1990 to 2010

Proportion of children under five years who are stunted (percentage)

ROSA  47  58
ESARO  42  47
WCARO  40  45
MENA   30  40
EAP    27  40
TACRO  21  40
Least developed  17  42
Sub-Saharan Africa  41  45
Asia  35  49
Developing world  34  45

Note: prevalence estimates calculated according to WHO Child Growth Standards
Source: DHS, MICS and national nutrition surveys, 1990 - 2010, and additional analysis by
Challenges, directions

• Moving from vertical intervention approach to integrated programme packages
• Establishing linkage with food security/agriculture and social protection is foreign to nutrition staff
• Advocate for nutrition being an outcome of other sector programmes (ECD, Agriculture, social protection)
• Community based models are the center piece for stunting reduction – needs R&D and partnerships
• How to make behavior change communication more effective, measurable
• Finding best delivery platform to reach those most affected weighing pros and cons – not always the health system
Challenges, directions

• Capacity needs:
  • Programme engineering - analysis of bottlenecks
  • How to work multi sectorally
• Maternal nutrition
• Package of interventions is changing & with more innovations - how do they relate, how to assure safety, effectiveness, efficiency and operational realities
• Better evaluation of how well policy applications work and feed back to guide policy development
• More attention for better coordination
thank you!