GFF Country Induction Workshop, January 28 – February 1, 2018

GFF and Nutrition
What is **Malnutrition**?

Malnutrition occurs when nutrient and energy intake **do not meet** or **exceed** an individual’s requirements to maintain growth, immunity and organ function. It is a general term and covers both undernutrition and overnutrition.
At Risk POPULATIONS

- Children Under Age 5
- Girls and Women of Reproductive Age
- Victims of Violence, Conflict, Displacement
- Poor and Marginalized
A lifecycle approach

Causes and consequences of malnutrition across the lifecourse
FORMS OF MALNUTRITION

► STUNTING
► WASTING
► UNDERWEIGHT
► LOW BIRTH WEIGHT
► MICRONUTRIENT DEFICIENCIES
► OVERWEIGHT/OBESITY
All children can attain same growth if in healthy environments.
Forms of malnutrition

**STUNTING**

- Height-for-age below -2 standard deviations from the WHO Child Growth Standards reference median for a child of same sex

- An indicator of *chronic malnutrition* due to inadequate intake or repeated infections

- Also called “linear growth faltering”
Forms of malnutrition

WASTING

► An indicator of **acute malnutrition** due to recent severe food shortage or infections

► **Moderate Acute Malnutrition**
  - Weight-for-height between -2 and -3 SD below WHO median without edema **OR** 11.5>=MUAC <12.5 cm

► **Severe acute malnutrition**
  - Presence of edema in both feet (bilateral) **OR** severe wasting <-3 SD compared to WHO median without edema **OR** MUAC <11.5 cm
Other forms of malnutrition

Underweight

Children
Weight-for-age < -2 standard deviations from the WHO reference median for a child of same sex
Easier to perform in community
Can’t distinguish acute from chronic undernutrition

Adults
Body Mass Index <18.5

Micronutrient Deficiencies
A critical lack of certain vitamins and minerals that are essential for human survival, health, and well-being
Vitamin A
Iron (anemia)
Folic acid
Iodine
Zinc

Overnutrition:
Consumption of excess energy or too much of a given nutrient over time

Children
Weight-for-height>+2 SD

Adults
Overweight: BMI ≥25
Obesity: BMI ≥30
Global, regional, and country trends in stunting

- Source: WDI 2016
LEVELS AND TRENDS IN CHILD MALNUTRITION

UNICEF / WHO / World Bank Group
Joint Child Malnutrition Estimates
Key findings of the 2017 edition

In Asia...
- 87 million
- 20 million
- 36 million

In Africa...
- 59 million
- 10 million
- 14 million

In Latin America and Caribbean...
- 6 million
- 4 million
- 1 million

In Oceania...
- 0.5 million
- 0.1 million
- 0.1 million

Worldwide...
- 155 million STUNTED
- 41 million OVERWEIGHT
- 52 million WASTED

Stunting affected an estimated 22.9 per cent or 154.8 million children under 5 globally in 2016.
An estimated 6.0 per cent or 40.6 million children under age 5 around the world were overweight in 2016.
In 2016, wasting continued to threaten the lives of an estimated 7.7 per cent or nearly 52 million children under 5 globally.

Why do we care about undernutrition?

Undernutrition accounts for 45% of all deaths among children under the age of five.

*Lancet Nutrition Series (2013)*

Major causes of death in children <5 years with disease-specific contributions of undernutrition

Why do we care about undernutrition?

Neonatal outcomes & women’s morbidity and mortality

- **Folic acid deficiency**: Neural tube defects; LBW
- **Iodine deficiency**: Pre-term birth; intellectual disability; neonatal mortality
- **Short maternal stature**: increased risk of obstructed labor (cephalopelvic disproportion)
- **Anemia**: increased risk of post partum hemorrhage; LBW; peri- and neonatal mortality; maternal mortality
- **Calcium deficiency**: gestational hypertension; pre-eclampsia
- **Breastfeeding**:
  - Duration independently associated with lower incidence of diabetes for women [E. Gunderson, et al. JAMA Intern Med. Published online January 16, 2018]
  - Protective effect against hormone receptor-negative breast cancers
Why do we care about undernutrition?

Undernutrition suffered in early life leads to long-term consequences

- Diminished immune response
- Reduced intellectual ability
- Lower economic productivity
- Early growth restriction (pre/postnatal) increases risk of hypertension, diabetes and both cardiovascular and metabolic disease as adults
The first 1,000 days lay the foundation for human capital

Whole brain tractography of three month old Bangladeshi children, comparing development of white matter fiber tracts based on level of nutrition.

Charles A. Nelson, Harvard Medical School
Child stunting continues to be the major challenge
Ranging from 22% (Haiti) to 49% (Madagascar)
Nutrition in second wave countries: Major challenges

Micronutrient deficiencies among children also problematic
- Vitamin A deficiency in the African countries
  - Ranging from 38% in Rwanda to 65% in CAR
- Iron deficiency anemia in children more prevalent in Asian countries but also high in Africa (>40%)
  - 42% in Afghanistan and Cambodia, 64% in Indonesia
- Consumption of iodized salt <65% in all countries except Rwanda (87%)

Anemia in women aged 15-49 (pregnant and non-pregnant), as per WHO cut-offs
- Mild problem (20-40%) in Afghanistan, Haiti, Indonesia, Madagascar, Malawi
- Moderate problem (40-60%) in Burkina, Cambodia, CAR, Cote d’Ivoire
Nutrition in second wave countries: Major challenges

► Poor IYCF practices
  - Exclusive breastfeeding (EBF) <6 months is on average <50%
  - Minimum acceptable diet (MAD) is <20% in all African countries and Haiti, and <40% in Cambodia and Indonesia.
  *No data for Afghanistan, CAR, Madagascar*

► Rising threat of overweight
  - Among children, in Indonesia (12%) and Rwanda (8%)
  - Among women, greater than 20% in all countries except Cambodia (18%) and Madagascar (15%); highest in Haiti (36%)
### Summary of nutrition challenges in new GFF countries

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<th>Country</th>
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#### Notes on categorization of indicators:
Indicators 1-3 and 4-7
- >40% = high
- 30-40% = medium
- <30% = low

Indicator 4:
- <80% = low
- ≥80% = high

Indicator 8:
- >10% = high
- 6-10% = medium
- ≤5% = low

Indicator 9:
- ≥30% = high
- 20-29% = medium
- <20% = low

#### Legend
1. Child stunting
2. Vitamin A deficiency in children
3. Iron-deficiency anemia in children
4. Consumption of iodized salt
5. Anemia in women 15-49
6. EBF <6 months
7. Minimum acceptable diet
8. Child overweight
9. Maternal overweight
Identifying Causes of Undernutrition
Economic Growth Alone Will Not Reduce Stunting


Stunting prevalence, %

GNI per capita

200 600 1,800 5,400 16,200 48,600

0 10 20 30 40 50 60 70
UNICEF Conceptual Framework

Child Nutrition

Food/Nutrient intake

Health

Immediate Causes

Underlying Causes

Nutrition Specific Interventions

Access to food

Maternal & childcare practices

Water & sanitation, health services

Institutions

Political & Ideological Framework

Economic Structure

Environment Technology, People

- Infant and young child nutrition and treatment of severe undernutrition
  - Micronutrient supplementation & fortification
  - Hygiene practices

- Agriculture & food security
  - Health Systems
  - Soc. protection/safety nets
  - Water and sanitation
  - Gender and development
  - Girls’ education
  - Climate change

- Poverty reduction & economic growth programs
  - Governance, stewardship capacities & management
  - Trade & patents (& role of private sector)
  - Conflict resolution
  - Environmental safeguards
How can we reduce undernutrition?
Three Main Nutrition-Specific Intervention Categories

Social and Behavior Change
Communication for Improved Feeding and Nutrition Care Practices

Micronutrient Interventions and Deworming

Supplementary and Therapeutic Feeding
Nutrition Specific

Address key underlying determinants of undernutrition

Can be implemented at large-scale and are effective at reaching vulnerable, nutritionally at-risk populations

Serve as delivery platforms for nutrition specific interventions
<table>
<thead>
<tr>
<th>WOMEN’S EDUCATION &amp; EMPOWERMENT</th>
<th>QUALITY REPRODUCTIVE &amp; HEALTH SERVICES</th>
<th>AGRICULTURE</th>
<th>WATER AND SANITATION</th>
<th>SOCIAL PROTECTION/ SAFETY NETS</th>
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<tbody>
<tr>
<td>Maternal education</td>
<td>Prevention of adolescent pregnancy</td>
<td>Improve access to more diversified, nutritious, safe diet</td>
<td>Access to safe water, adequate sanitation</td>
<td>Birth registration</td>
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<td>Parenting education on early stimulation, growth and development</td>
<td>Birth spacing</td>
<td>Reduce women’s workload</td>
<td>Hygiene/ handwashing promotion</td>
<td>Parental leave and adequate childcare</td>
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<td>Quality RMNCAH care</td>
<td>Micronutrients (bio)fortification of staple foods</td>
<td>Food hygiene</td>
<td>Child protection services</td>
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<td>Food preservation</td>
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<td>Social assistance transfer programs</td>
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<td>Nutrition in extension</td>
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<td>Conditionalities to use nutrition services</td>
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Pathways to impact: how the GFF improves nutrition outcomes

**IMPROVED NUTRITION OUTCOMES**

**Direct**
- Nutrition specific interventions (both supply- and demand-side)
- Integrated delivery (e.g., essential packages, using existing contact points, results-based financing, aligning incentives across sectors)
- Through multi-sectoral (nutrition sensitive) approaches (e.g., school nutrition and health curricula, cash transfers for nutrition counseling sessions) + private sector

**Indirect**
- Health systems strengthening (e.g., human resources for health, supply chain)
- Health financing reforms (e.g., domestic resource mobilization, risk pooling)
GFF investments to support nutrition: prioritized interventions in first 16 countries

**Nutrition Interventions**

- SBCC for improved infant, young child, adolescent and maternal nutrition care practices
- Treatment of moderate and severe acute malnutrition
- Micronutrient supplementation (through ANC, PNC, VA campaigns, etc.)
- Increased dietary diversity
- Kangaroo Mother Care for LBW infants
- Deworming
- FP for improved birth spacing
- Sanitation; hygiene; potable water

**Guatemala:**
- Strengthened PHC system for nutrition/health service delivery; CCT program with health co-responsibility

**Tanzania:** Complementary financing with Power of Nutrition and USAID Trust Fund; addressing bottlenecks related to HR and nutrition/health commodities procurement

**Focus on maternal, infant, child, and adolescent nutrition in all Investment Cases**

**DRC:** FP/SRHR to reduce adolescent pregnancy & decrease LBW; maternal nutrition; promotion of diversified diets; WASH

**Cameroon:** KMC for preterm/LBW infants; scale-up of PBF for community-based nutrition service delivery in conflict-affected areas

**Access to health services**
**GFF Investments in Nutrition**

- **Training/capacity building** at community/health facility levels for:
  - Improved counseling/support for infant and young child feeding;
  - Management of MAM and SAM
  - Promotion of women’s and adolescents’ nutrition
  - Kangaroo Mother Care for LBW infants (Cameroon, DRC, Kenya, Tanzania, Uganda)

- **Integration of nutrition into full continuum of MCH service provision** such as:
  - Counseling on infant feeding during ANC, delivery, PNC
  - Maternal anemia prevention/treatment during ANC, delivery, PNC

- **Provision of nutrition commodities** (micronutrient supplements and fortificants; deworming meds; RUTFs; etc.)
CB-delivery for nutrition services using CHWs and ECD workers/preschools (Kenya), including child growth monitoring and promotion, distribution of micronutrient supplements and deworming featured in all ICs.

Community outreach through mobile clinics in underserved areas and “hit and run” approach in security challenged settings (NE Nigeria).

Baby-Friendly Hospital Initiative (Ethiopia, Tanzania)
GFF Investments in Nutrition

Supply-Side Incentives, such as:
- Performance-Based Financing (PBF) for CB-distribution of nutrition commodities (Cameroon)
- Scaling-up PBF for improved quality of nutrition service provision (Uganda)
- Scaling-up PBF for community health assistants’ implementation of CB-nutrition especially in remote areas (Liberia)
- PBF to motivate mobile teams’ delivery of nutrition services (NE Nigeria)

Demand-Side Incentives, such as:
- Conditional cash transfers linked to nutrition and sanitation outcomes for adolescent girls (Cameroon)
- School-based nutrition/health programs utilizing adolescents as peer-to-peer educators and as managers of program sites (Uganda)
- Selective implementation of free N/H care for children <5 and PW (Nigeria)
Learn more

www.globalfinancingfacility.org
GFFsecretariat@worldbank.org
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