Malnutrition in Afghanistan
Scale, scope, causes and potential response
Outline

- Status of Malnutrition in Afghanistan
- Why Malnutrition Matters
- Determinants of Malnutrition
- What Can Be Done
- Recommendations for Afghanistan
Status of Malnutrition in Afghanistan
High Levels of Malnutrition in Children

- Very high rate of stunting: 60.5%
- One third of children (33.7%) underweight
- Wasting: 8.7% (18.7% in 1–2 year olds)
- Anemia: 50% in children 6–24 months
- High iodine deficiency: 71.9% (school age)
- High mortality rates: IMR: 111/1000, U5MR: 161/1000
High Levels of Malnutrition in Women

- High levels of chronic energy deficiency: 20.9% low BMI
- Iron deficiency: 48.4% non-pregnant
- Iodine deficiency: 75%
Why Malnutrition Matters
Vicious Cycle of Poverty and Malnutrition

Income poverty

- Low food intake
- Frequent infections
- Hard physical labor
- Frequent pregnancies
- Large families

Malnutrition

- Direct loss in productivity from poor physical status
- Indirect loss in productivity from poor cognitive development and schooling
- Loss in resources from increased health care costs of ill health
Malnutrition Reduces Productivity: 3 Pathways

- Costly inefficiencies (e.g. illness, deaths)
- Direct links: Decreased physical productivity
- Indirect links: impaired cognitive development, schooling and productivity

Overall loss to the economy of 2–3% of GDP annually
Pathway 1: Costly Inefficiencies

Malnourished children increase public costs

Higher mortality
- Malnutrition is an underlying cause of 1/3 of child mortality (1).
- Vitamin A deficiency reduces immunity (23% higher mortality risk) (2) and causes blindness.

More likely to be sick
- Higher risks of hospitalization and longer hospital stays.
- Lost employment or schooling for care givers.

Chronic diseases
- Higher pre-disposition for adult diabetes and coronary heart disease (3).
- Higher likelihood of cognitive problems after age 65 (35% for women and 29% for men) and higher risks of adult schizophrenia (4).
Pathway 2: Decreased Physical Productivity

Malnutrition reduces productivity in adulthood

Indirect (childhood)
- Guatemala: children who were well nourished under 3 had wages rates 34–47% higher and incomes 14–28% higher in adulthood (1)
- 1% loss of adult height = 1.4% loss in productivity (2) and 4% decrease in wages (3)

Direct (adults)
- Anemia = 5–17% decrease in adult productivity (4)
Pathway 3: Impaired Cognitive Development and Schooling

- Low birth weight: reduction of 5 IQ points (1)
- Stunting: reduction of 5–11 IQ points (1)
- Iodine deficiency: reduction 10–15 IQ points (2). An estimated 535,000 children are born every year mentally impaired in Afghanistan due to iodine deficiency (3)
- Costa Rica: Iron deficiency anemia in childhood: reduction of up to 25 points by age 19 (2)

Malnourished children have lower learning capacity and education outcomes

Cognitive development (0–2 years)

School performance

- Education attainment is associated with birth weight and with stunting (3)
- Guatemala: well nourished children (under3) achieved 1.2 more years of schooling (women) and 17% increase in reading comprehension (4)
Critical Window of Opportunity
Need to focus on **pregnancy and first 2 years** of life

![Graph showing Z-scores (WHO) against Age (months) for weight and height.]

**Source:** Victora, de Onis, Blossner, Shrimpton. Pediatrics (15 Feb 2010)
Determinants of Malnutrition
Determinants of Malnutrition

Malnutrition

Immediate Causes
- Inadequate Food Intake
- Disease

Underlying Causes
- Household Food Insecurity
- Inadequate Maternal & Child Care
- Poor Health Services & Unhealthy Environment

Basic Causes
- Formal & Informal Infrastructure
- Political Ideology
- Resources

(UNICEF 1990)
Determinants of Malnutrition in Afghanistan

- **FOOD INSECURITY**
  - Affects 1/3 of households, seasonal, economic access is a challenge

- **POOR CARE FOR WOMEN AND CHILDREN**
  - Low access to care during pregnancy, need to improve child feeding and stimulation

- **LOW NUTRITION AWARENESS**
  - Inefficient use of available resources

- **LIMITED ACCESS TO HEALTH SERVICES**
  - High rates of infection, access and quality still challenges
What Can Be Done
### Table 1
**Evidenced Based Direct Interventions to Prevent and Treat Undernutrition**

**Promoting good nutritional practices ($2.9 billion):**
- breastfeeding
- complementary feeding for infants after the age of six months
- improved hygiene practices including handwashing

**Increasing intake of vitamins and minerals ($1.5 billion):**
- periodic Vitamin A supplements
- therapeutic zinc supplements for diarrhoea management
- multiple micronutrient powders
- de-worming drugs for children (to reduce losses of nutrients)
- iron-folic acid supplements for pregnant women to prevent and treat anaemia
- iodized oil capsules where iodized salt is unavailable
- salt iodization
- iron fortification of staple foods

**Therapeutic feeding for malnourished children with special foods ($6.2 billion):**
1. Prevention or treatment for moderate undernutrition
2. Treatment of severe undernutrition (“severe acute malnutrition”) with ready-to-use therapeutic foods (RUTF).

## Nutrition Interventions Yield High Returns

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<tr>
<th>Intervention</th>
<th>Benefit:cost</th>
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<tr>
<td><strong>1. Micronutrient supplementation</strong></td>
<td></td>
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<tr>
<td>Vitamin A capsules &lt;2</td>
<td>100:1</td>
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<tr>
<td>Therapeutic zinc, infants</td>
<td>14:1</td>
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<tr>
<td><strong>2. Micronutrient fortification</strong></td>
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<tr>
<td>Salt iodization</td>
<td>30:1</td>
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<tr>
<td>Iron fortification (staples)</td>
<td>8:1</td>
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<tr>
<td><strong>3. Biofortification</strong></td>
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<td>Plant breeding (iron, zinc, A)</td>
<td>18:1</td>
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<tr>
<td><strong>4. Deworming preschoolers</strong></td>
<td>6:1</td>
</tr>
<tr>
<td><strong>5. Behavior change</strong></td>
<td></td>
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<tr>
<td>Community nutrition programs</td>
<td>13:1</td>
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<td><strong>6. Community treatment SAM</strong></td>
<td>25:1</td>
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Recommendations for Afghanistan
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<td>Nutrition as foundational to national development</td>
<td>Adequate local capacity built and supported to design and execute effective nutrition policies and programs</td>
<td>Direct nutrition interventions</td>
<td>Determinants of under-nutrition addressed through multi-sectoral approaches</td>
<td>Coordinated support for nutrition from development partners</td>
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Recommendations

Pillar 1
Nutrition as foundational to national development

- Create National Cross-cutting Nutrition Strategy and high-level cross-sectoral coordination committee
- Make the case for nutrition as a sound national investment
Recommandations

Pillar 2
Adequate local capacity built and supported to design and execute effective nutrition policies and programs

- Build immediate capacity for some government staff
- Develop capacity to train on nutrition issues in-country
- Build greater government ownership/control over nutrition programs and projects
- Ensure resources are available for operating needs of ministries
Pillar 3
Direct nutrition interventions

- Scale-up nutrition interventions within BPHS
- Improve community-level programming through:
  - CHW support groups
  - Developing a cadre on community nutrition workers
- Combine nutrition promotion with activities to improve household food security
- Scale-up school-based nutrition promotion program, as a strategy to reach girls before engagement
- Scale-up IYCF promotion activities through multiple community-level platforms reaching women
- Expand the use of public-private partnerships to expand reach (e.g. zinc, micronutrient powders, double-fortified/iodized salt, flour/oil fortification)
Recommendations

Pillar 4
Multi-sectoral approaches

- Strengthen and coordinate food security surveillance
- Support RuWatSIP department to meet high demand for safe drinking water, improved sanitation and hygiene promotion
- Continue to support the NSP program, (esp. water and sanitation community demand)
- Support social protection programs to vulnerable households, including nutrition promotion as a component of a broader food security intervention (e.g. food for work, food for education)
Recommendations

Pillar 5
Coordinated support for nutrition from development partners

- Develop an improved mechanism to adequately coordinate multi-sectoral activities related to nutrition
- Prepare a multi-sectoral plan of action, under the leadership of a committee of Cabinet
There is a path to the top of even the highest mountain.

– Afghan proverb
Additional Slides