

# ***Childhood malnutrition in Asia: numbers count but do we care?***

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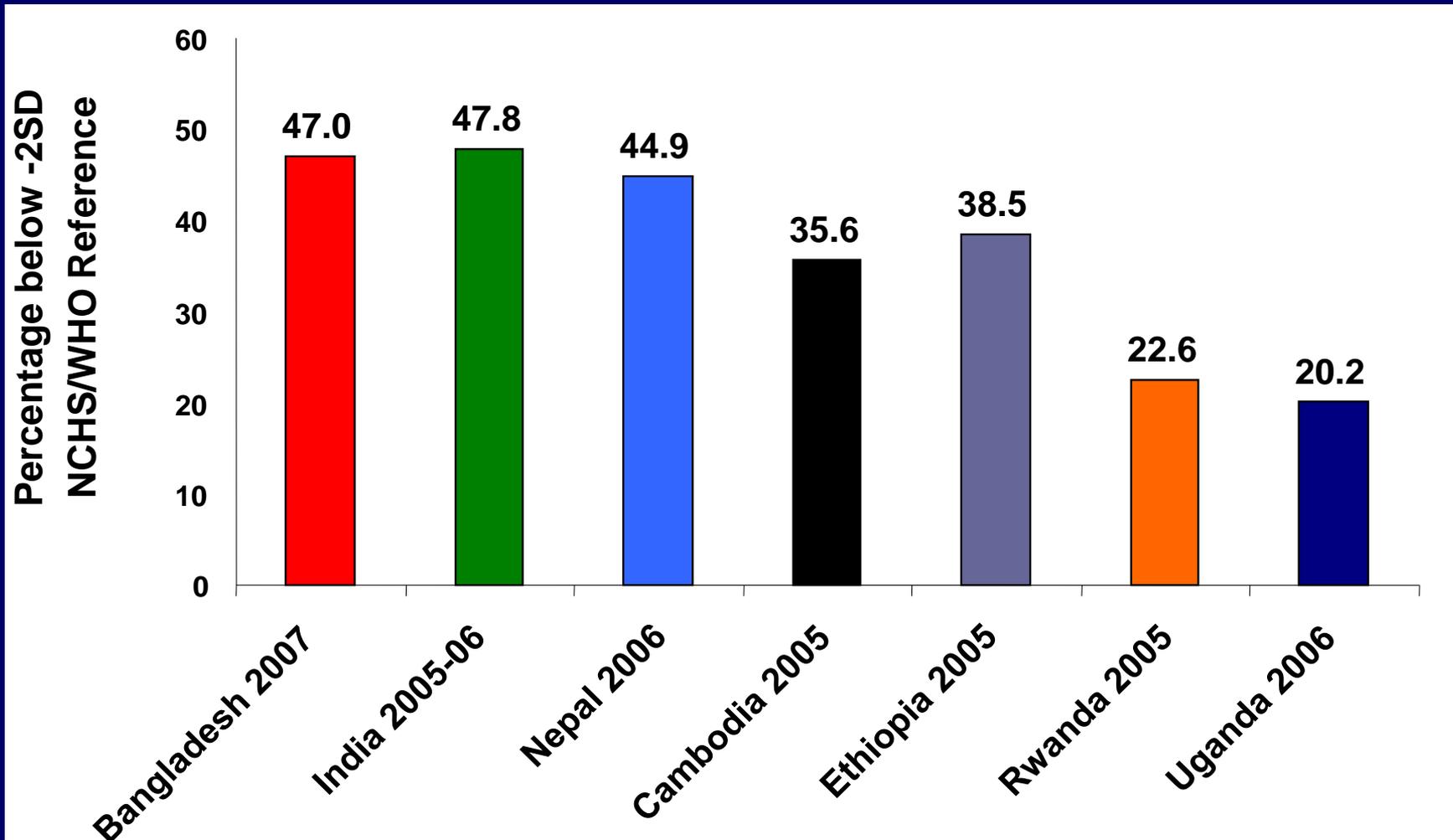
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President, CAPGAN

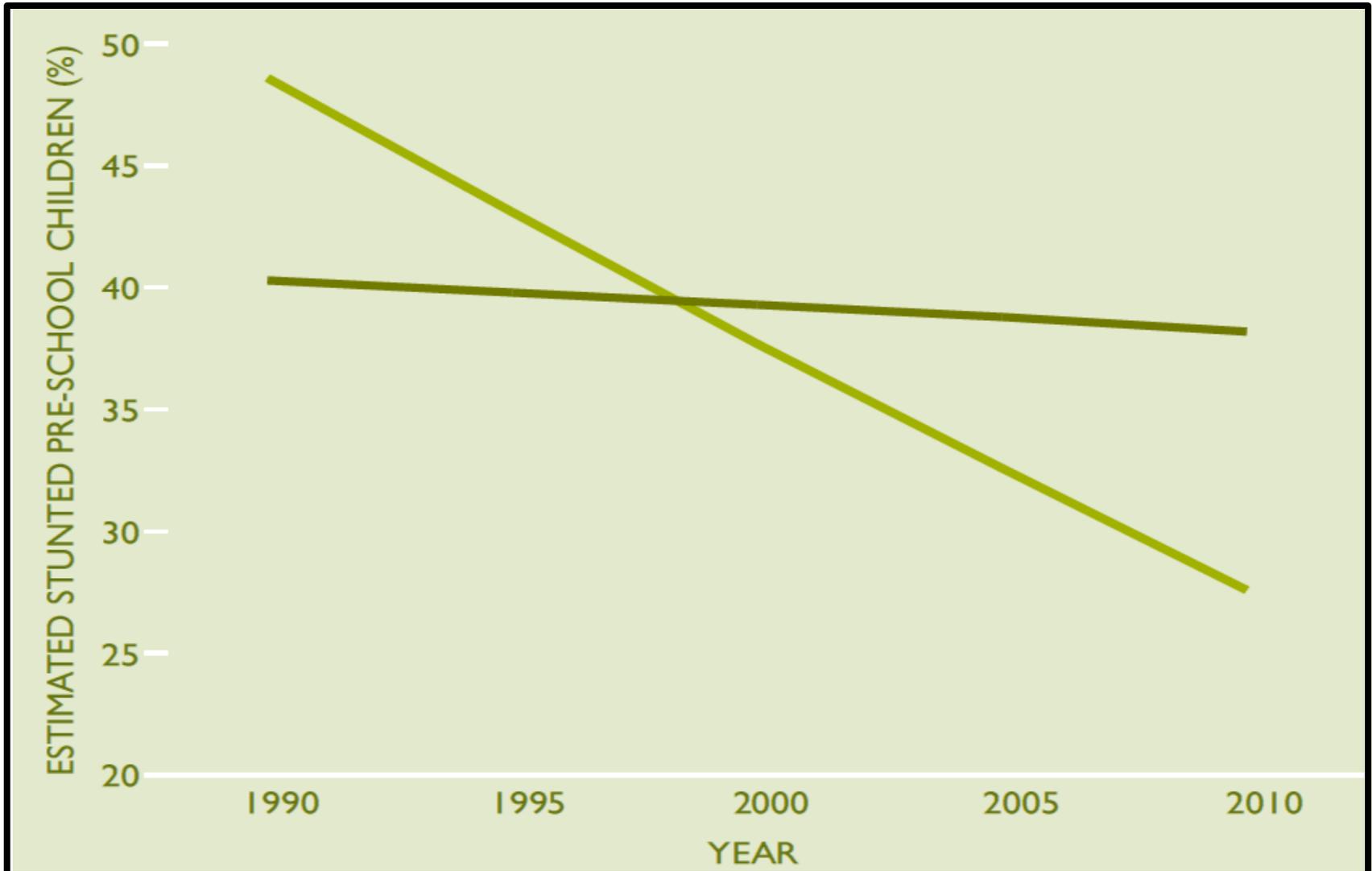
# Outline

- Burden of malnutrition in Asia
- Programs and research
- Training activities and capacity
- Challenges for Asia

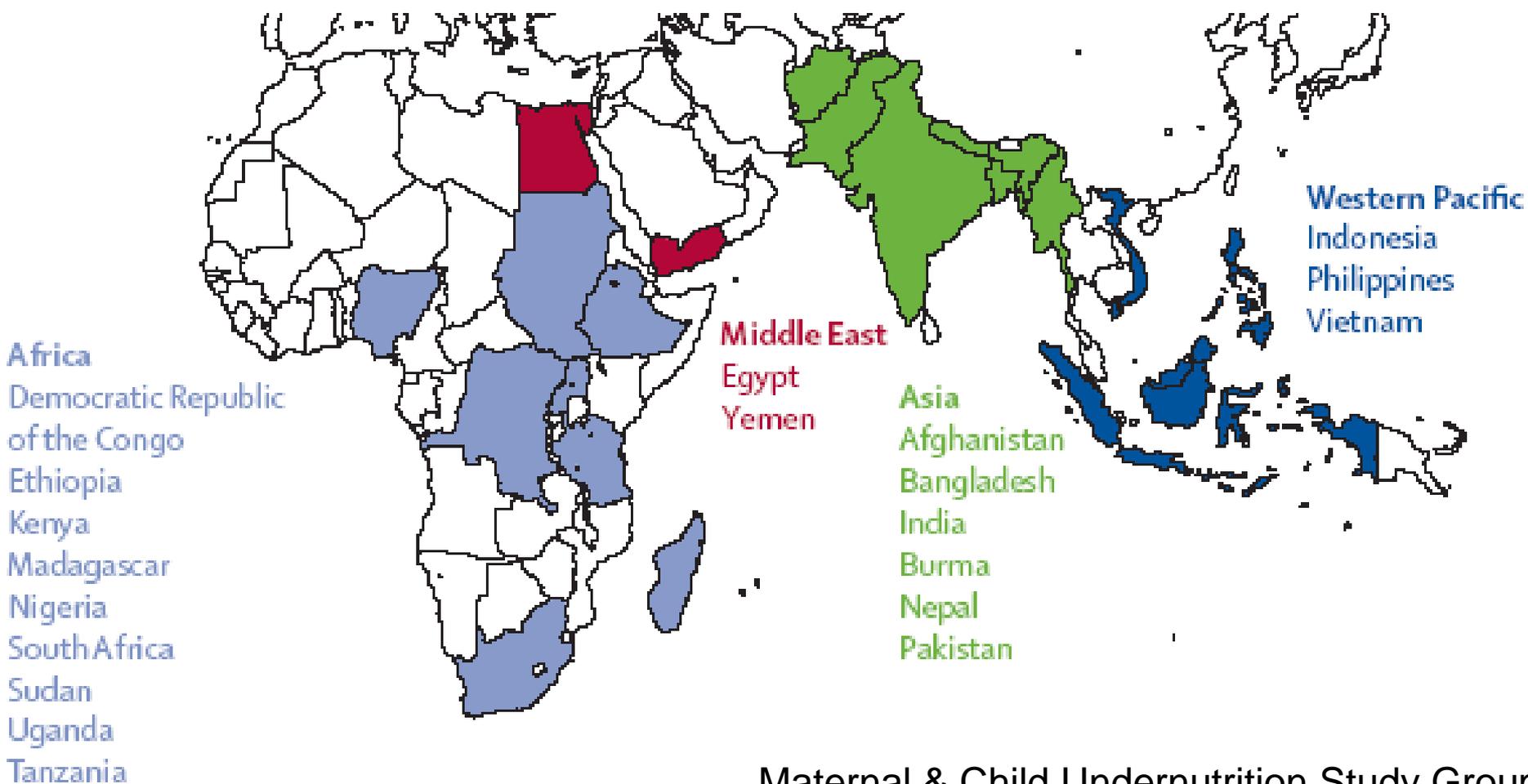
# *Malnutrition is more common in South Asia than in many countries in Sub-Saharan Africa*



# Stunting rates in Africa falling slowly but absolute numbers are more in Asia



# The 20 countries with the highest burden of child undernutrition



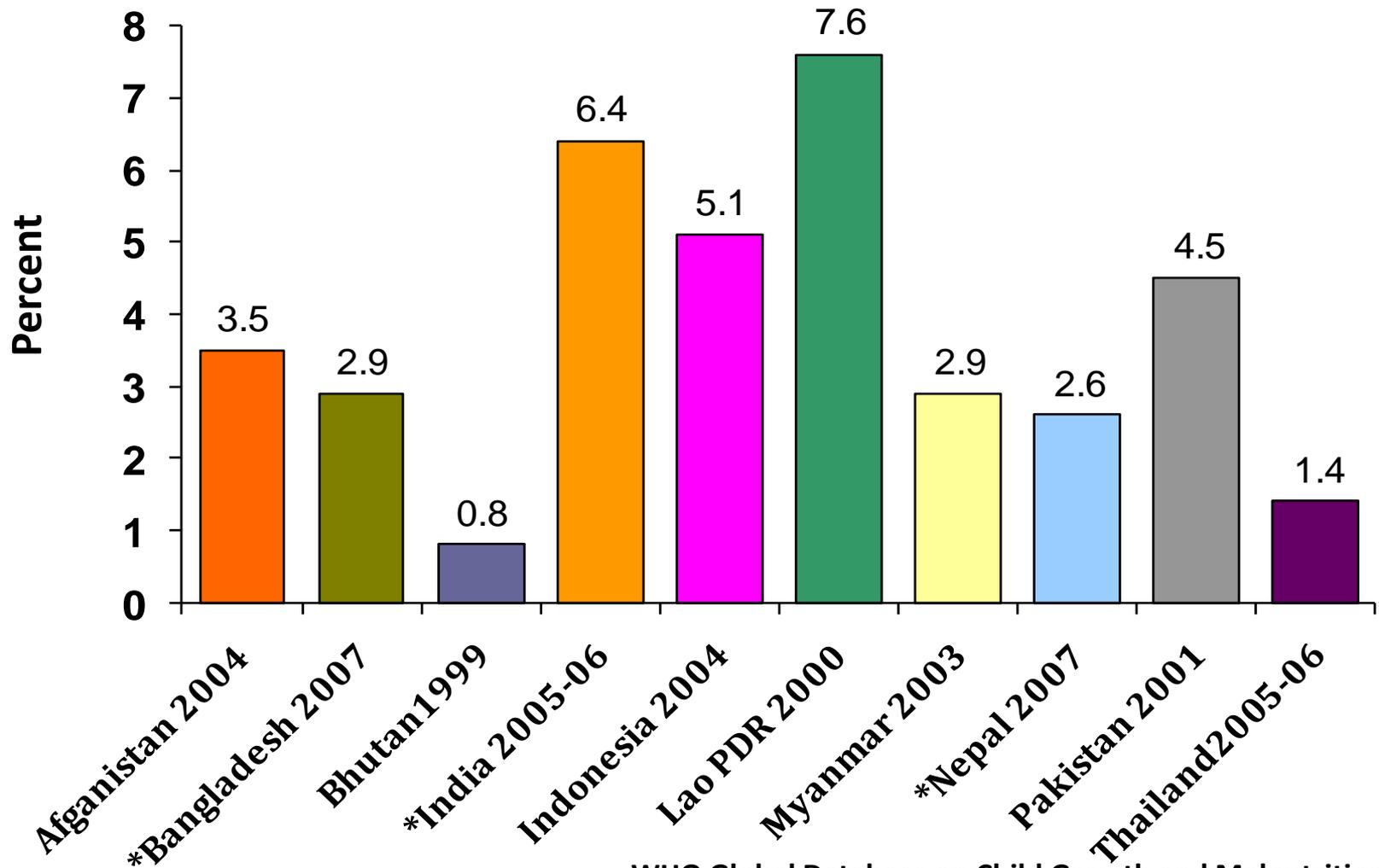
A child with severe acute malnutrition

Globally, 19 million children

2.9% prevalence in Bangladesh  
~ 600,000 children



# Severe Acute Malnutrition in Asia



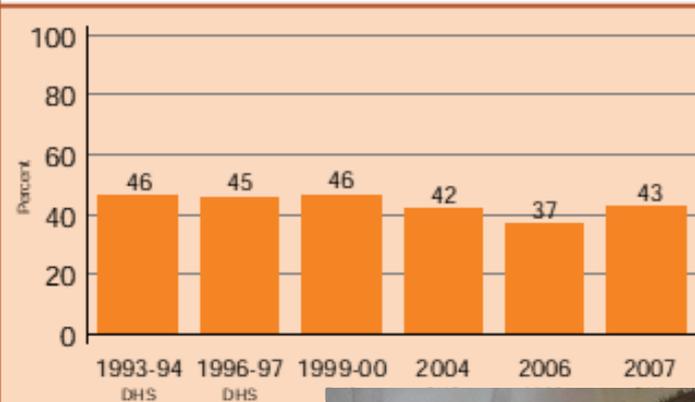
WHO Global Database on Child Growth and Malnutrition

\*Demographic and Health Survey

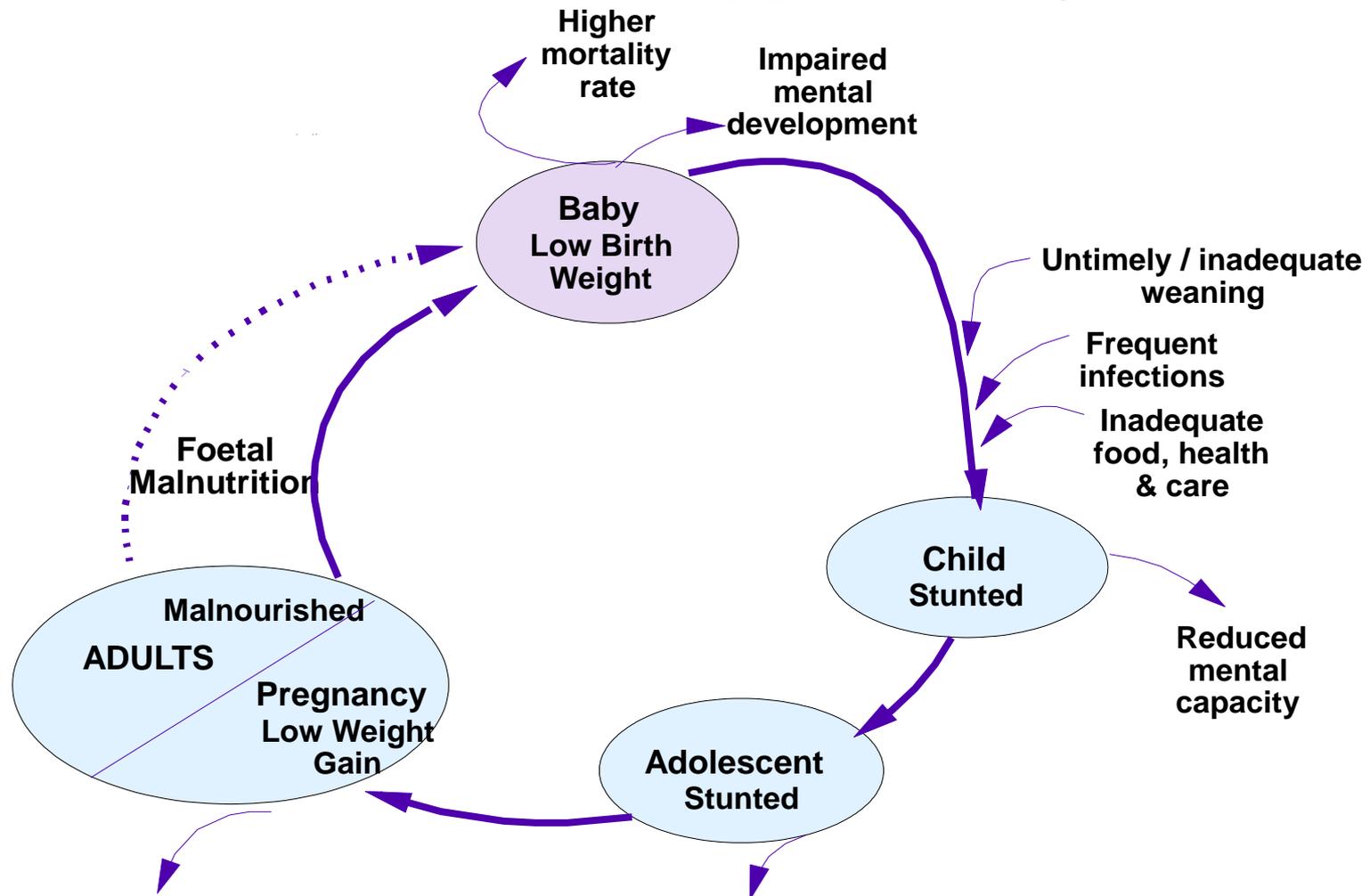


## Exclusive breastfeeding

Percent infants < 6 months exclusively breastfed



# Targeting Nutrition Interventions to the Window of Opportunity



# On the Causes of Malnutrition



Amartya Sen

*Famine and malnutrition are a result of a collapse of entitlements for a certain segment of society and the failure of the state to protect those entitlements.*

# Research needs

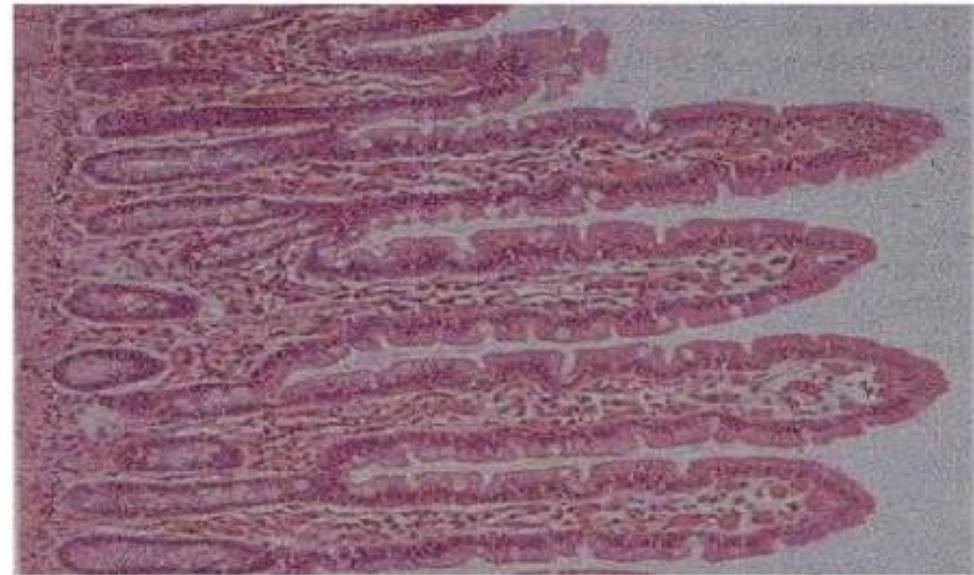
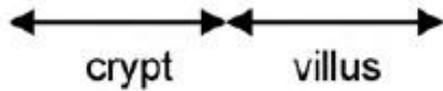
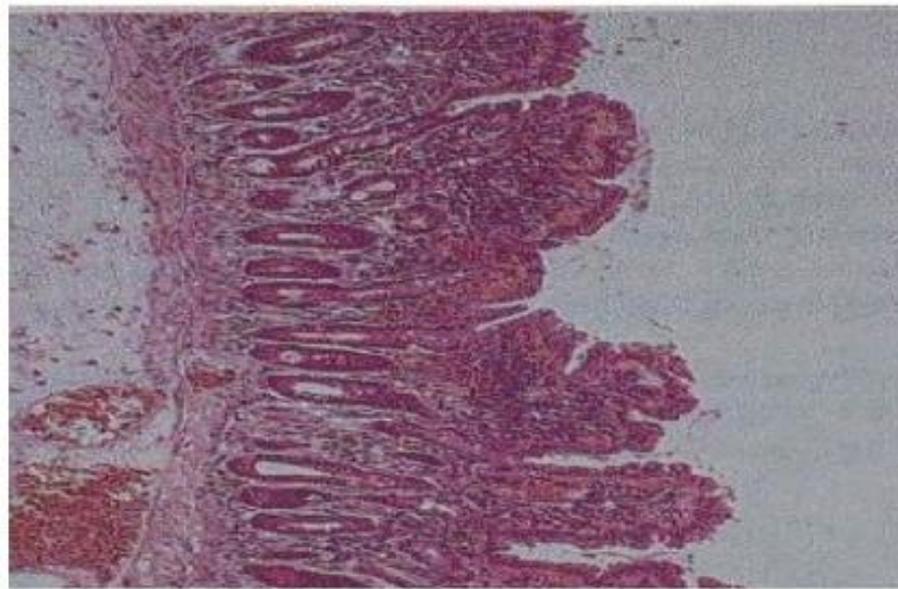
- Search for evidence-based interventions for management of acute malnutrition
- Develop ready-to-use diets from locally available food ingredients that can prevent and treat severe acute malnutrition
- Thinking out of the box – investigate etiology of childhood malnutrition in terms of genetic predisposition, environmental enteropathy, and effect of the gut microbiome

# Research needs

- The cost-effectiveness of package of nutritional interventions at the country level
- How can we improve complementary feeding?
- What can we do about stunting that has already occurred past 3 years of age?
- Research into quality & effectiveness of international aid for improving nutrition

# Environmental enteropathy

# Healthy



29 January 2011

*Its been 1 ½ years since the floods but acute malnutrition is still more than 20%*

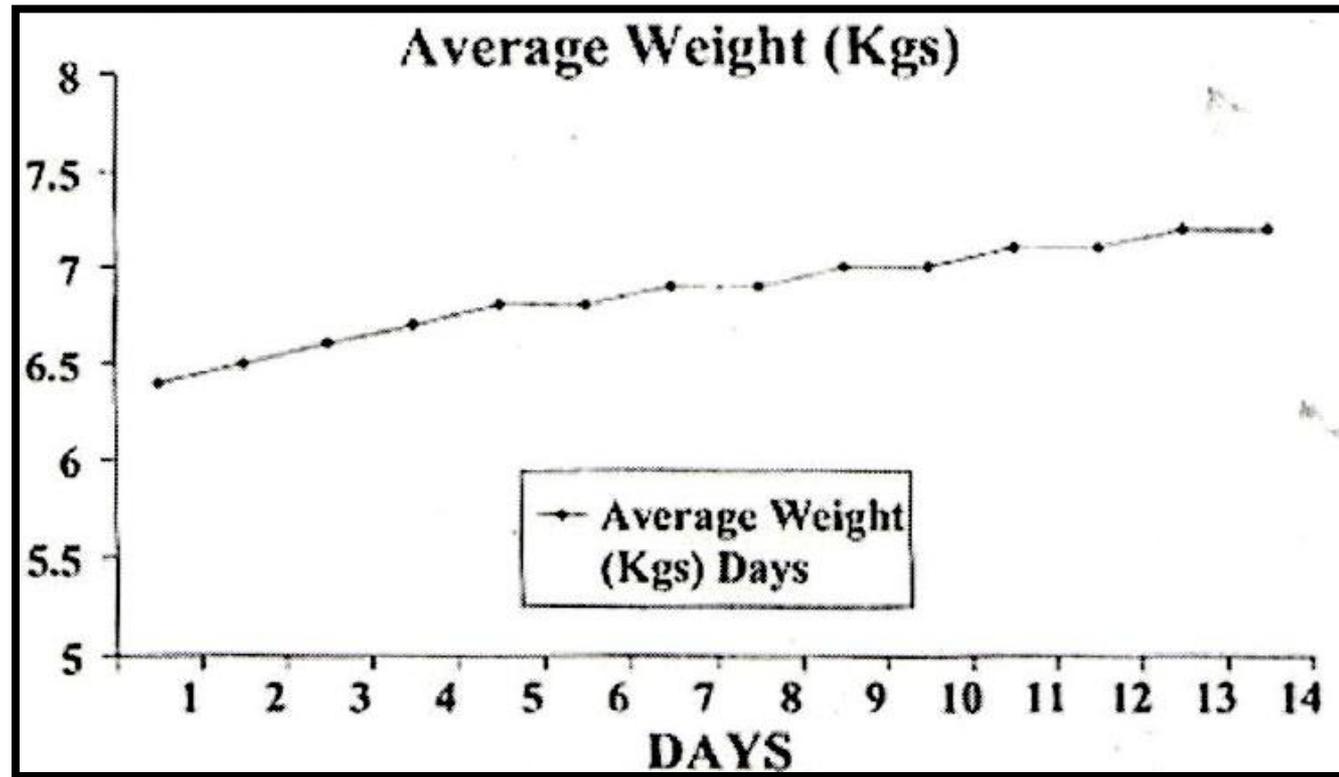
# ***Country Activities***



# PediaSure in the Rx of SAM in Pakistani Children

Akram Ds et al. JPMA 2000

- Non-controlled
- Small sample size
- Hospital based
- 33% attrition



# Consensus Statement: National Consensus Workshop on Management of SAM Children through Medical Nutrition Therapy

Indian Pediatrics 2010

- Ethically imperative to take actions for the 8 million children with SAM
- 85% can be managed in the community
- MNT should not interfere with the holistic approach to prevent child undernutrition



# Consensus Statement: National Consensus Workshop on Management of SAM Children through Medical Nutrition Therapy

Indian Pediatrics 2010

- Experience from Bihar & MP show that RUTF can be scaled up
- Local products in West Bengal & Gujrat show similar results
- Concerns about replacement of breastfeeding and commercialization



# Consensus Statement: National Consensus Workshop on Management of SAM Children through Medical Nutrition Therapy

Indian Pediatrics 2010

- Comparison of RUTF with home-based and locally-formulated products
- Physiological recovery and longer benefits of the above treatments
- Effect of introduction of RUTF on breast feeding
- Operationalization and economic analysis in different settings

*Suggested research*



"The attribution of more than a third of child deaths and more than 10% of total global disease burden to maternal and child undernutrition demonstrates the huge importance of these prevalent risk factors to international health goals."

## The Lancet Series on Maternal and Child Undernutrition

### Maternal and Child Undernutrition 3

## What works? Interventions for maternal and child undernutrition and survival

*Zulfiqar A Bhutta, Tahmeed Ahmed, Robert E Black, Simon Cousens, Kathryn Dewey, Elsa Giugliani, Batool A Haider, Betty Kirkwood, Saul S Morris, H P S Sachdev, Meera Shekar, for the Maternal and Child Undernutrition Study Group\**



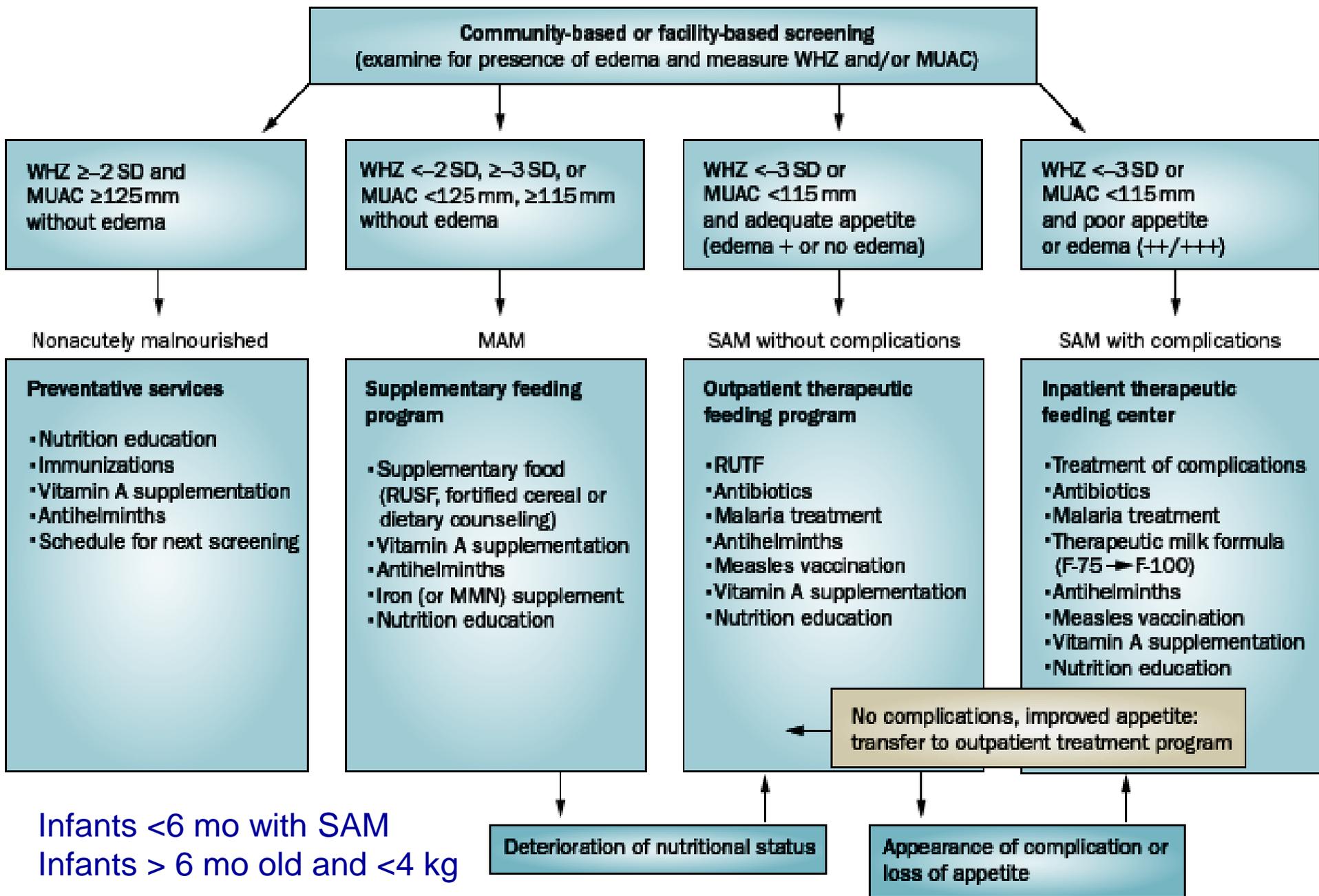
10 mo old infant with severe edema & skin lesions



02/06/2012 18:44



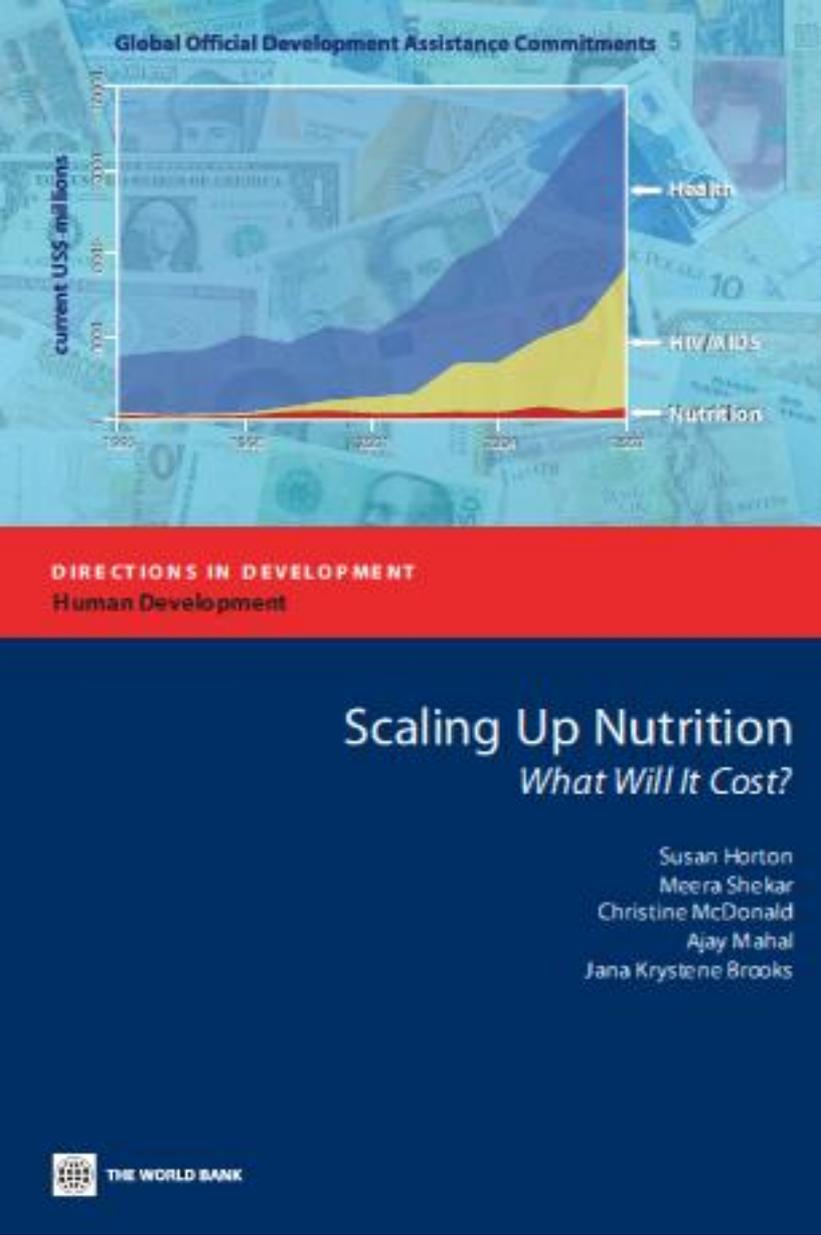
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# The Peanut Butter Debate

Enserink M. Science 2008



Treatment of SAM using a CMAM approach

USD 200 / episode, double prevalence to obtain incidence estimates

Food cost alone is USD 50-70 per episode for locally produced food

# **Regional Nutrition Strategy**

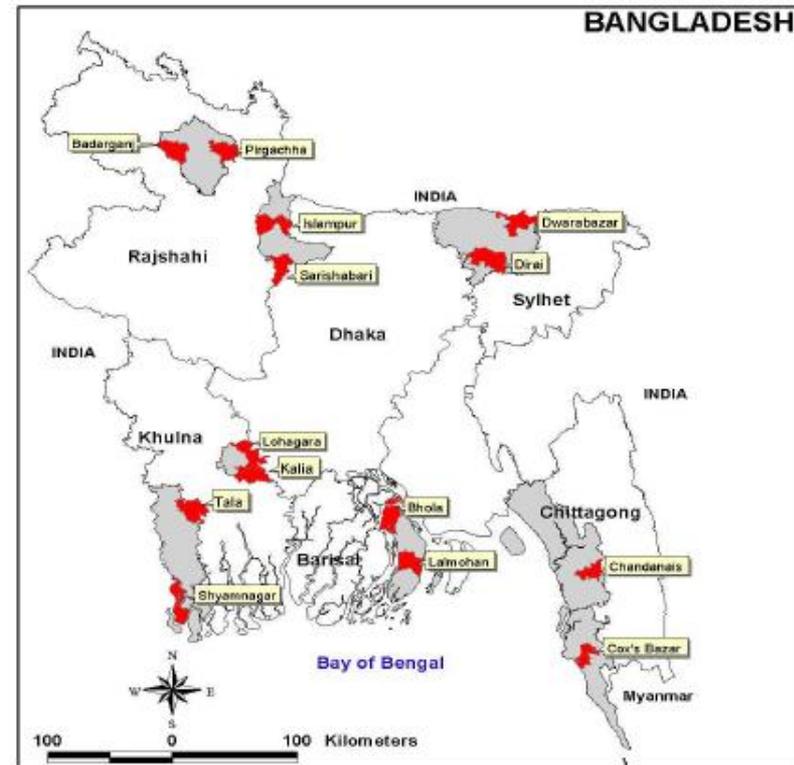
## **WHO South East Asia Region**

Bangladesh, Indonesia, Lao PDR, Nepal, India,  
Bhutan, Thailand, Timor Leste, Sri Lanka,  
Myanmar, DPR Korea, Maldives

August 2011

# EU-UNICEF Joint Action for improving Maternal and Young Child Nutrition Security in Asia (MYCNSIA), 2011-2014

Bangladesh, Indonesia, Lao PDR, Nepal and the Philippines



# Acute Malnutrition in Bangladesh

Age in months	% below -2SD (weight-for-height)
<6	17.9
6-9	13.3
10-11	25.9
12-17	22.8
18-23	23.5
24-35	16.1
36-47	15.1
48-59	15.3

Male	18.4
Female	16.5
Urban	14.4
Rural	18.2

***Several million children***

# Estimated caseloads of acutely malnourished children 6-59 months old



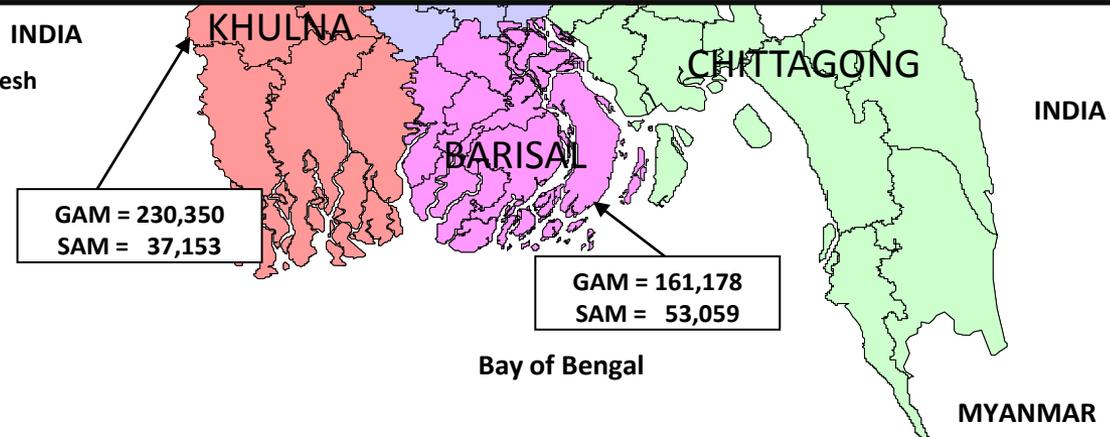
GAM = 644,702  
SAM = 162,486

**No national program on  
CMAM**

**LEGEND:**

Acute Malnutrition Situation in Bangladesh  
(WHO 2006 Growth Standards)

Divisions:	Prevalence of	
	GAM	SAM
Barisal	16.1%	5.3%
Chittagong	13.4%	3.5%
Dhaka	12.3%	3.1%
Khulna	12.4%	2.0%
Rajshahi	15.2%	3.8%
Sylhet	13.5%	4.0%



GAM = 230,350  
SAM = 37,153

GAM = 161,178  
SAM = 53,059

# How do we combat acute malnutrition?

- Scaling up the simple interventions to address malnutrition comprehensively
- For addressing SAM
  - improve facility-based management in hospitals
  - include management of SAM with complications in sub-district health complexes

# How do we combat acute malnutrition?

- For addressing SAM
  - identify SAM children in the community through community clinics, NGO workers, community mobilization
  - develop a therapeutic food based on locally available food ingredients