

Paediatric Health Assistance in Morocco



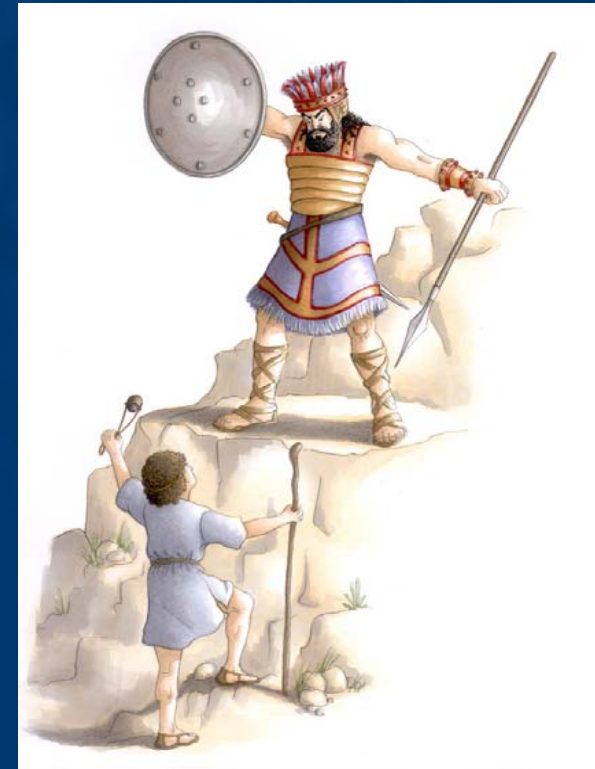
Moroccan Society of Perinatal Care



Mohamed BAYARI, MD
Casablanca, Morocco

Morocco strongly challenged by social development issues

- Access to basic education & quality primary health care
- Fight against illiteracy
- Reduction of poverty & social inequities
- Increase training & employment



National Program = ↓ Mortality

- Life Expectancy or Healthy Life Expectancy (HALE) at birth
 - ⇒ 68/ 72 male/ female (2006)
- Infantile Mortality
 - ⇒ under-5 mortality: 43/ 1000 live births (2004)
- Maternal Mortality
 - ⇒ 220/ 100000 live births (2000)

<14 years:

Pop. growth rate stable:

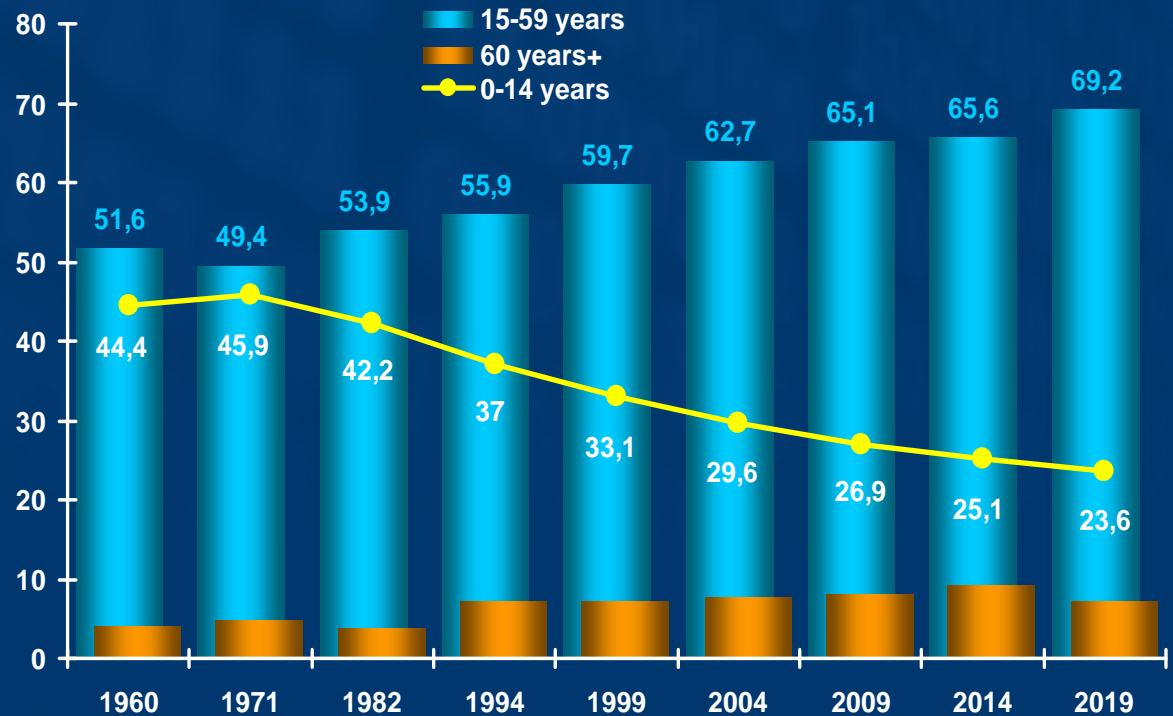
Total fertility rate:

↑ urbanization rate

9,2M (2005) ~**31%**

1,7% (1996) -1,4% (2006)

2,7 per woman (2004)





MOROCCO

Inequalities in Health, Nutrition, and Population

Nandini Oomman,^a Elizabeth Lule,^b Deborah Vazirani,^c and Ritu Chhabra^d

^a Consultant, Population and Reproductive Health Cluster, Health, Nutrition, and Population Department, The World Bank, Washington D.C., USA

^b Population and Reproductive Health Advisor, Health, Nutrition, and Population Department, The World Bank, Washington D.C., USA

^c Intern, Health, Nutrition, and Population Department, The World Bank, Washington D.C., USA

^d Operations Analyst, Nutrition, Health, Nutrition, and Population Department, The World Bank, Washington D.C., USA

**Poverty and health are intimately related.
Poverty is both a cause & consequence of ill health.**

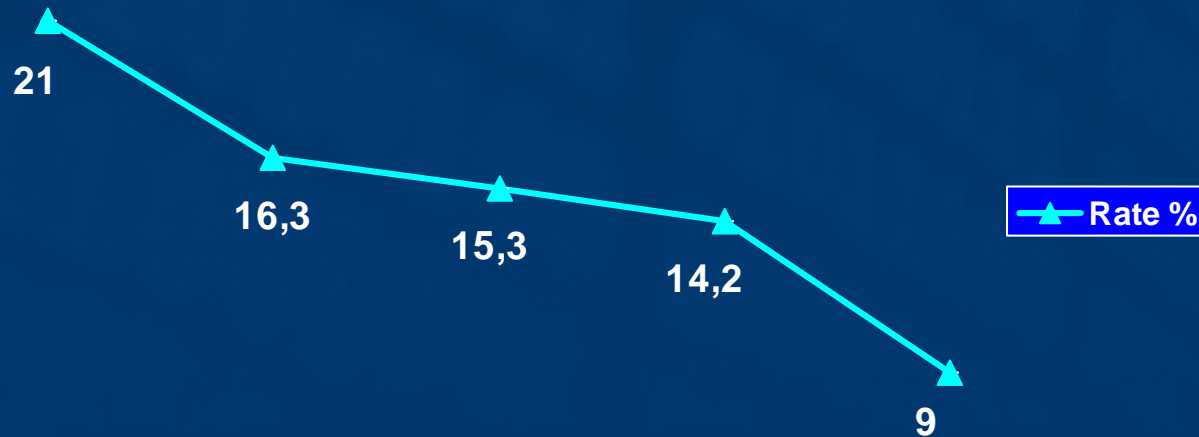
world bank, 2001



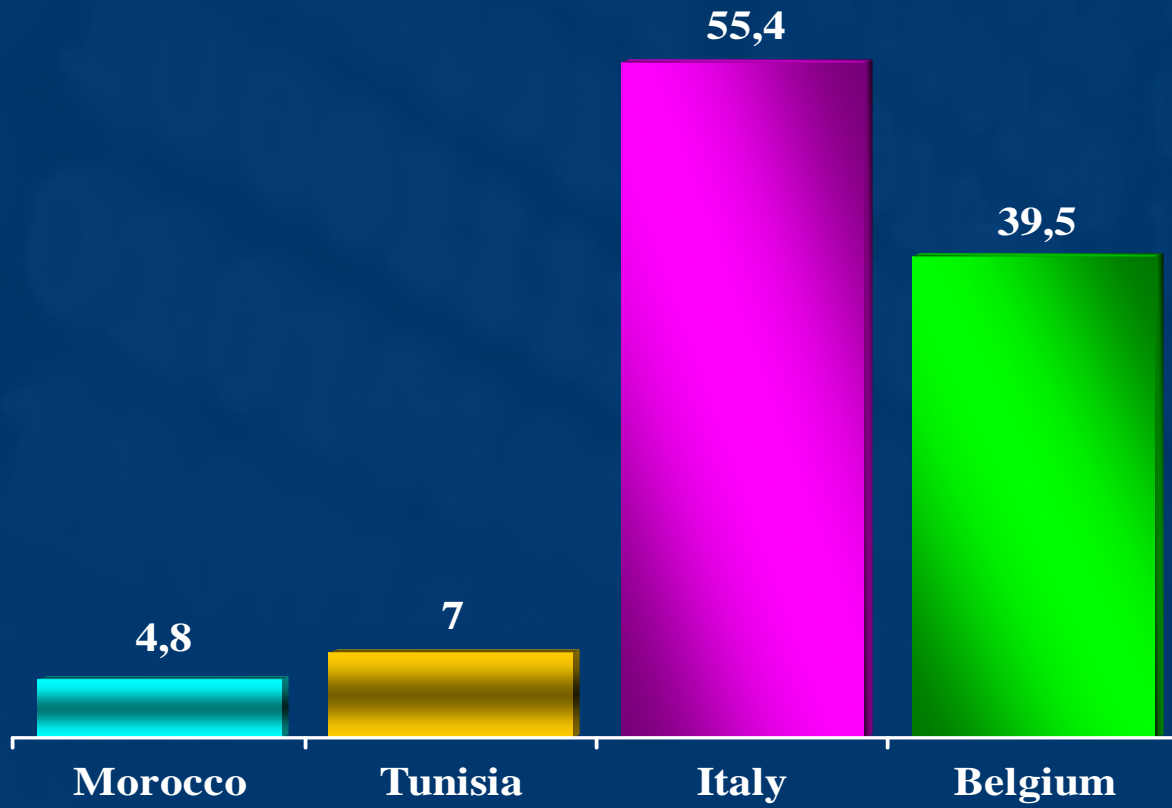
L'Enquête nationale sur le niveau de vie des ménages 2001-2007

Moins de pauvres... mais les inégalités persistent

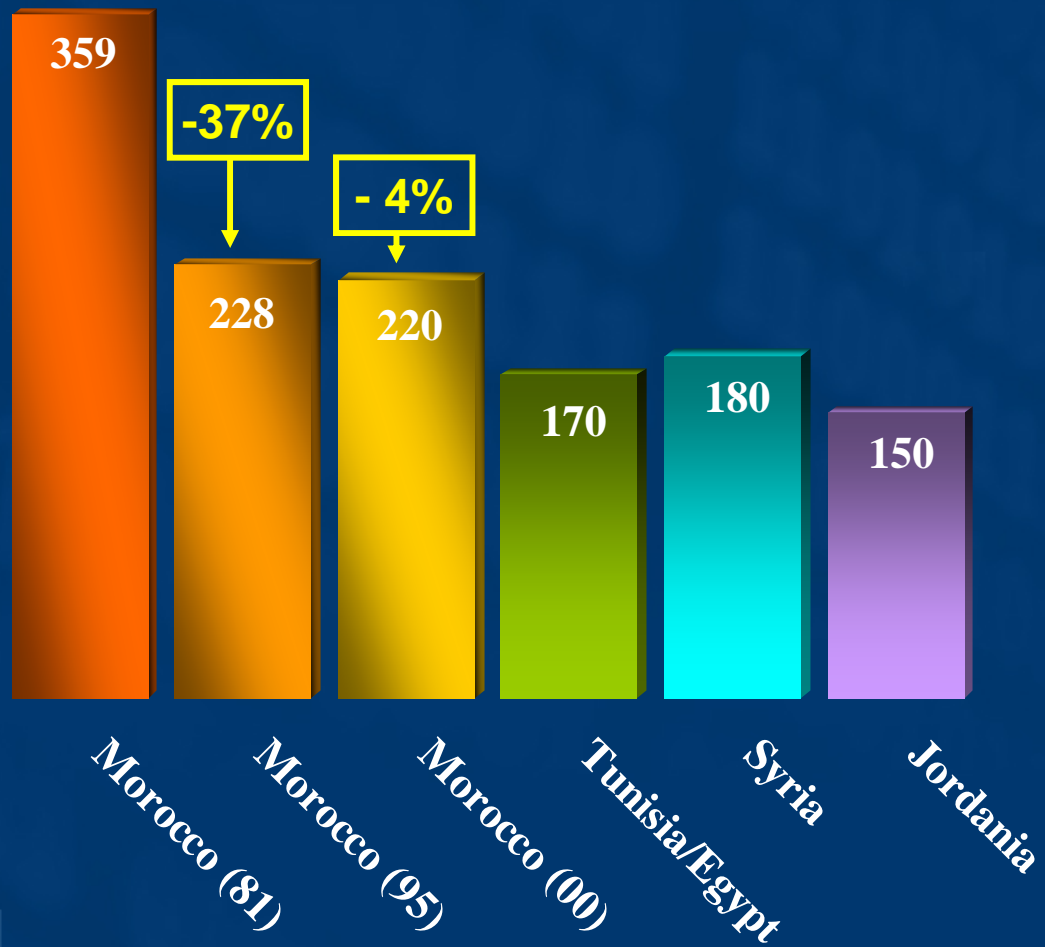
1985 1999 2001 2004 2007

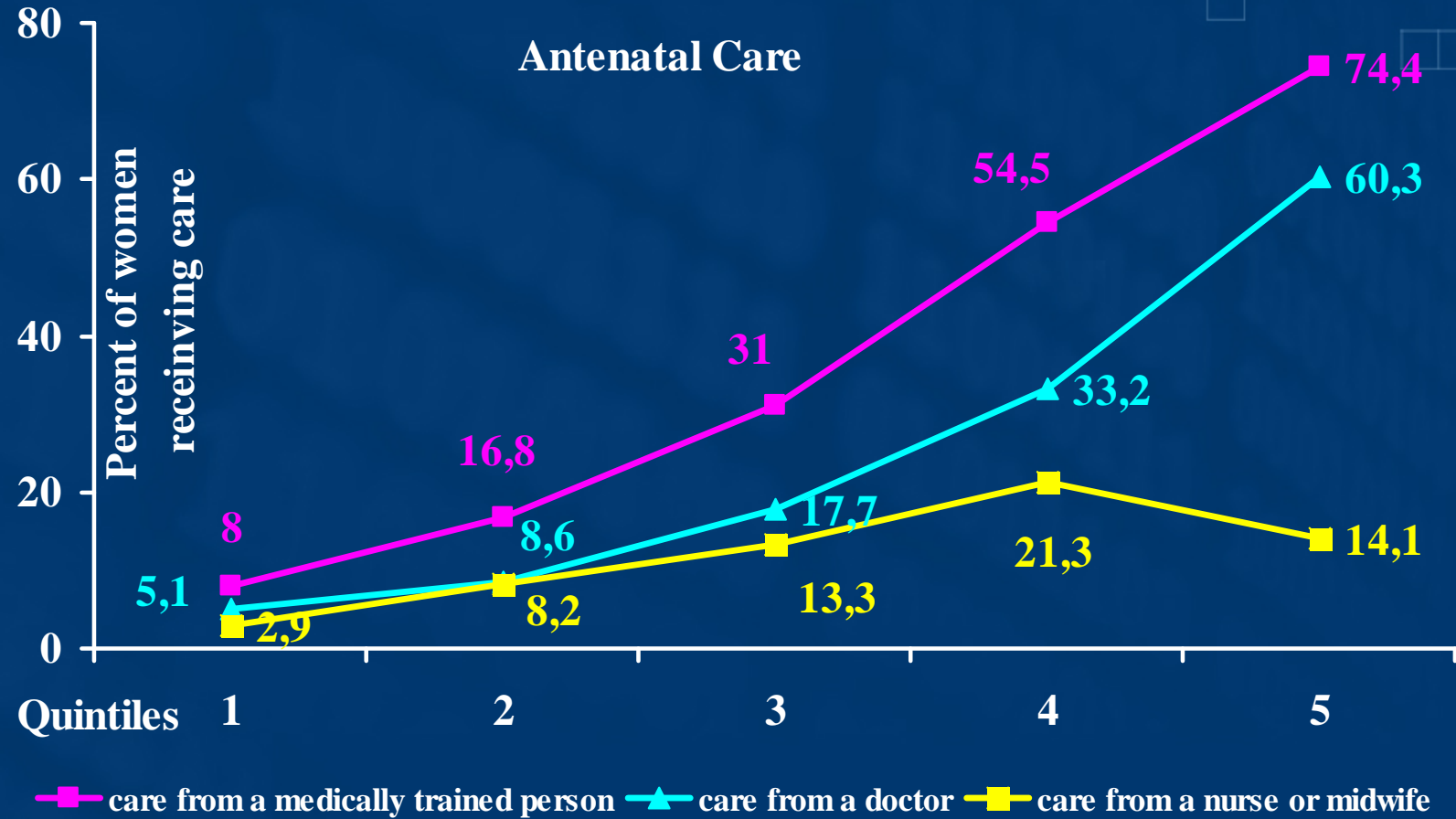


Medical Density per 10000 habitants

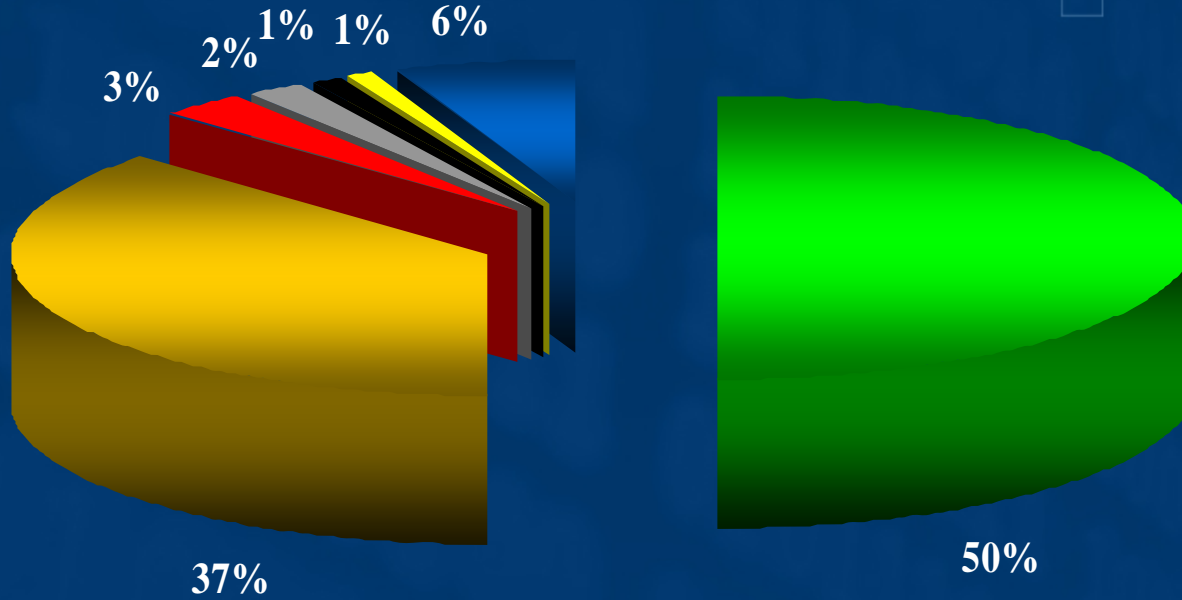


Maternal Mortality per 100000 Live Births

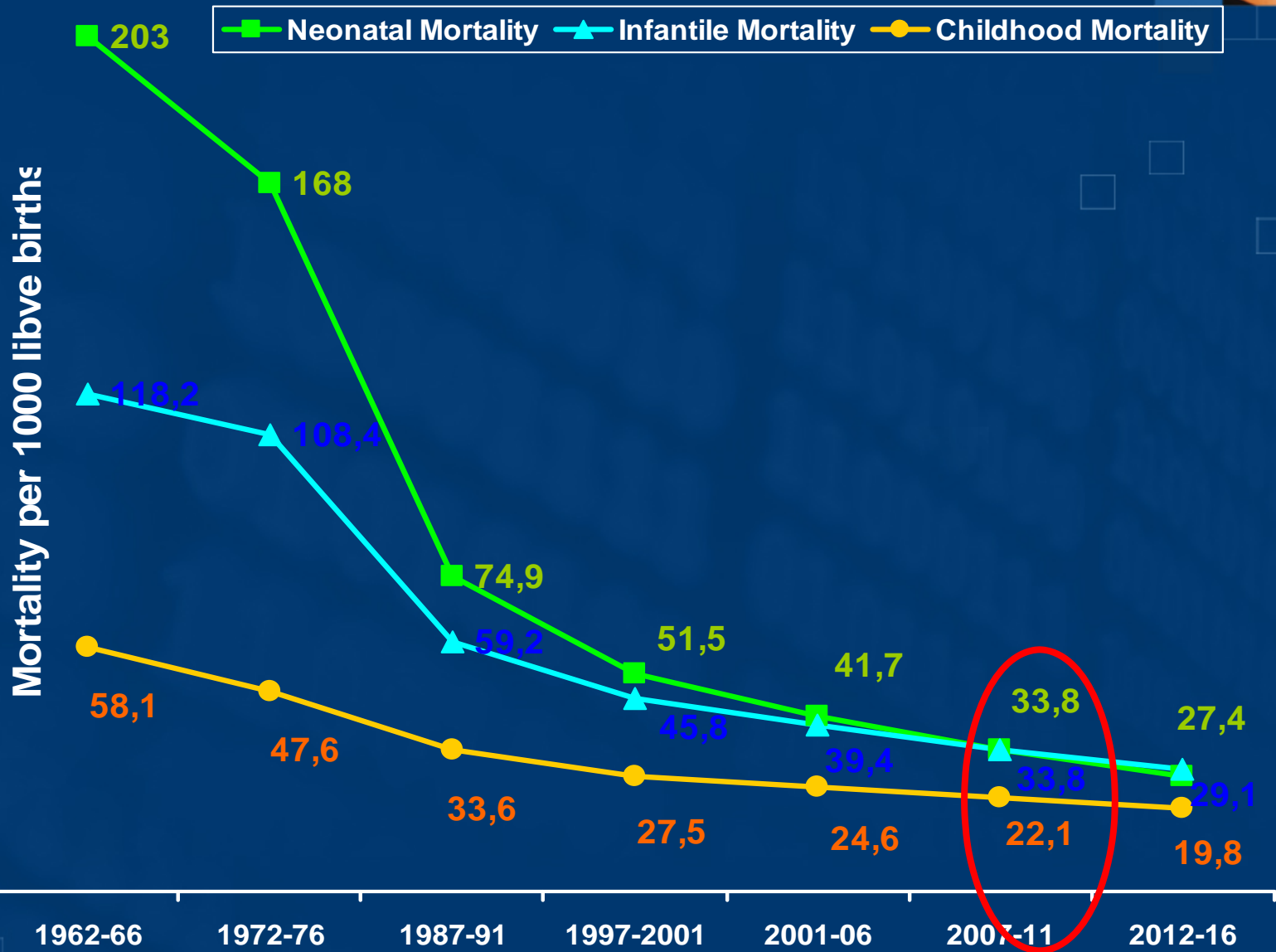




Maine Infantile's mortality causes, ECCD 1998

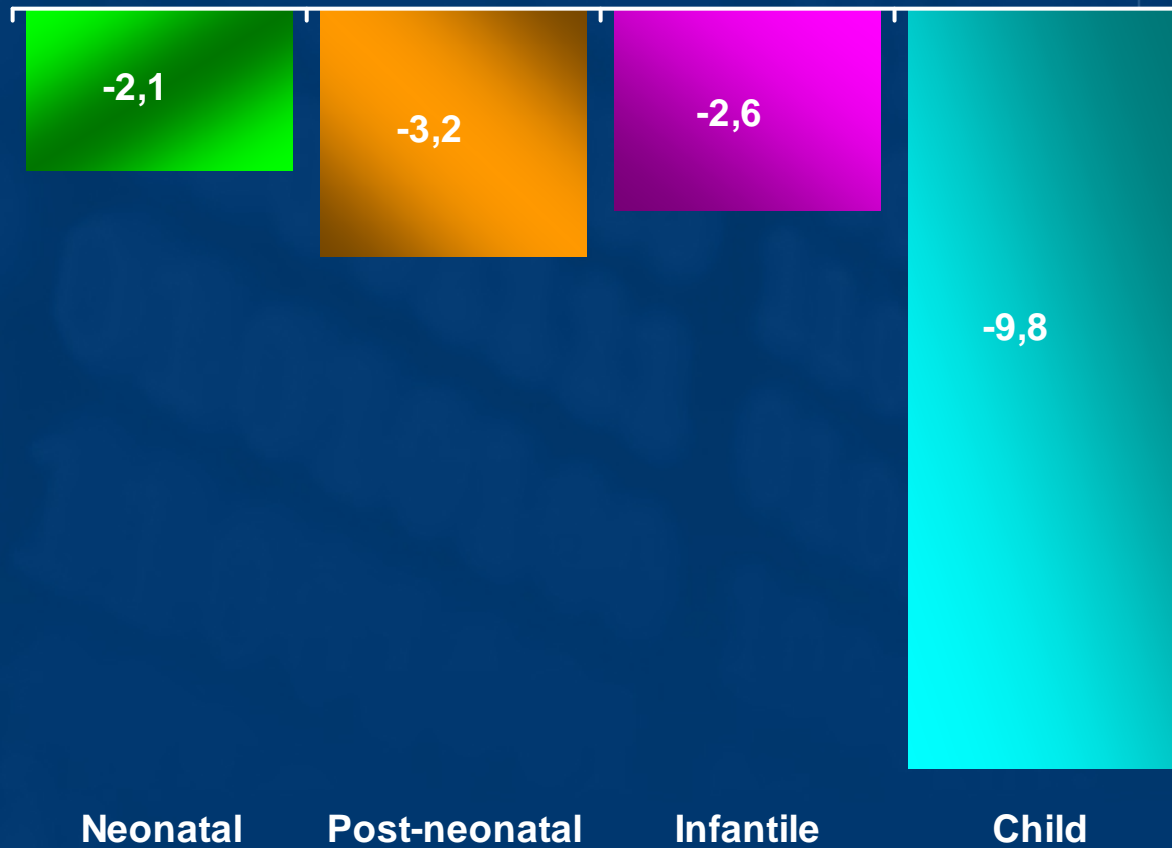


- Infectious Diseases
- Congenital abnormalities
- Other NTD
- Unknown
- Perinatal causes
- Undernutrition
- Injuries



Source: DRPF, Health Ministry
Rapport Politique Santé Enfant 2005

Evolution of Paediatric Mortality (1962-66 & 1997-2001)



Morocco: Bad student

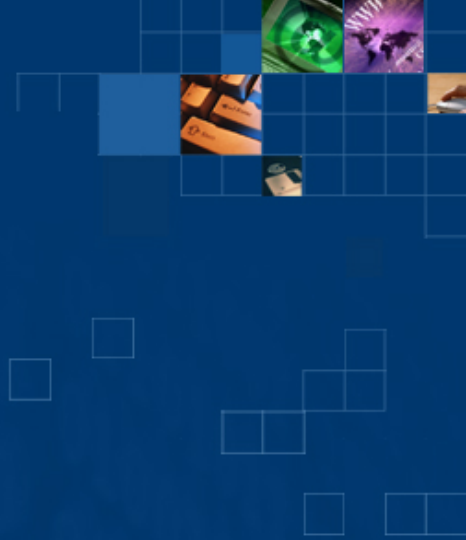
- Morocco (1997) 36,6
- Tunisia 26,2
- Jordania 31,3
- Egypt 29,1
- Syria 24
- Lebanon 25,4



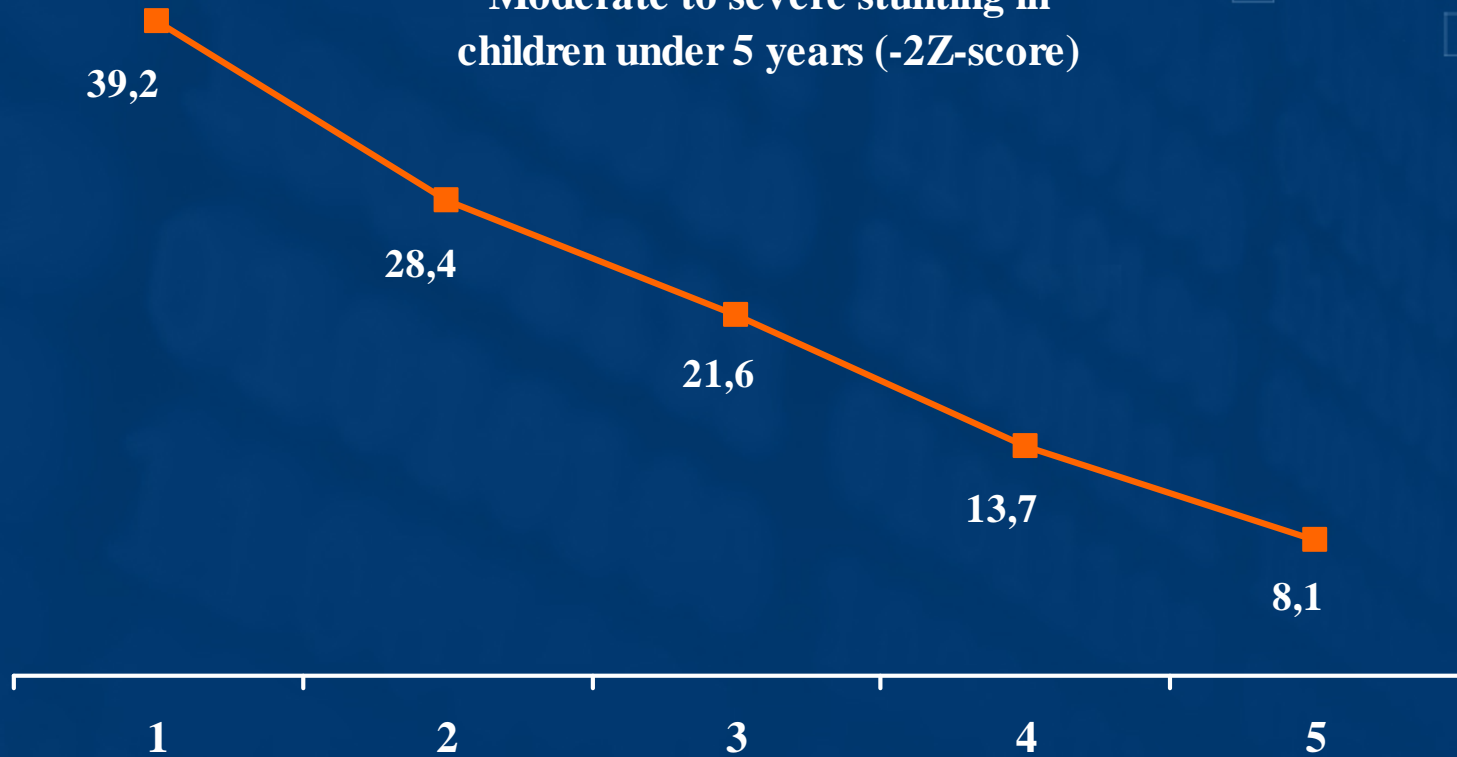
Global morbidity rate

- Perinatal affections 15,64%
- Infectious diseases 14,57%
- Neuro-psy diseases 13,47%
- CV diseases 11,3%

55,9%



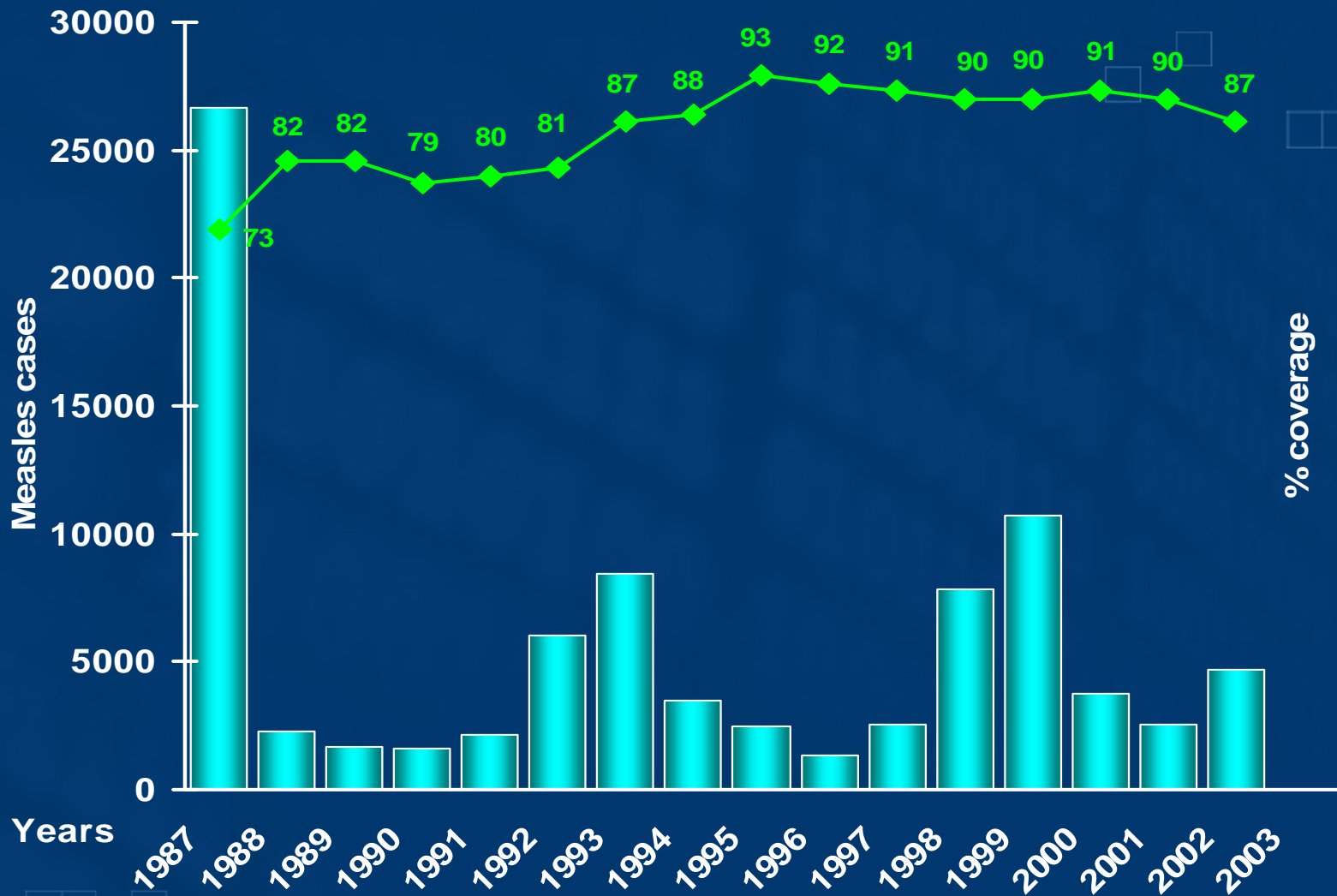
Moderate to severe stunting in children under 5 years (-2Z-score)



< 20% = Low degree of malnutrition;
20–29% = Medium degree of malnutrition;
30–39% = High degree of malnutrition;
40% = Very high degree of malnutrition.

What Are Government Clues Solving Problems?

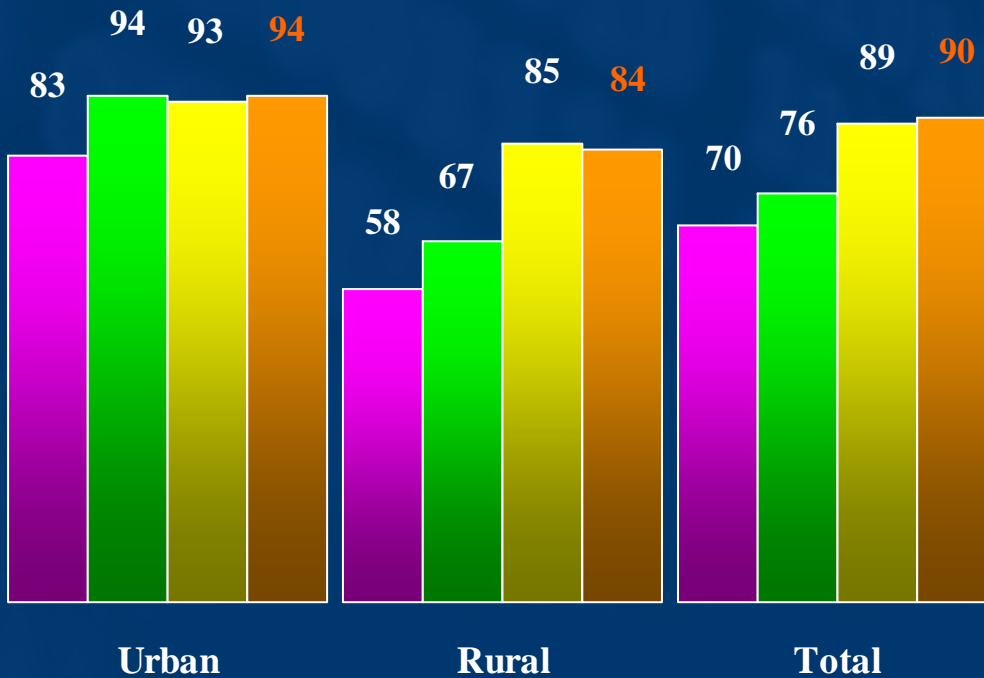
- Population's social coverage & protection
 - Compulsory Medical Insurance AMO/ RAMEC
- Decentralization & Regionalization
- National programs
 - Maternal & Infantile Health Program (SMI)
 - Integrated Management of Childhood Illness (IMCI)
 - National Immunization Program
 - ARI National Program
 - Anti-Diarrheal Program



Source: National Immunisation Program, Health Ministry

Immunization Coverage in Children Aged 12-23 months

- ENPS 87
- ENPS 92
- PAPCHILD 97
- EPSF 03-04



Fighting Against Diarrheal Diseases Program [PLMD]

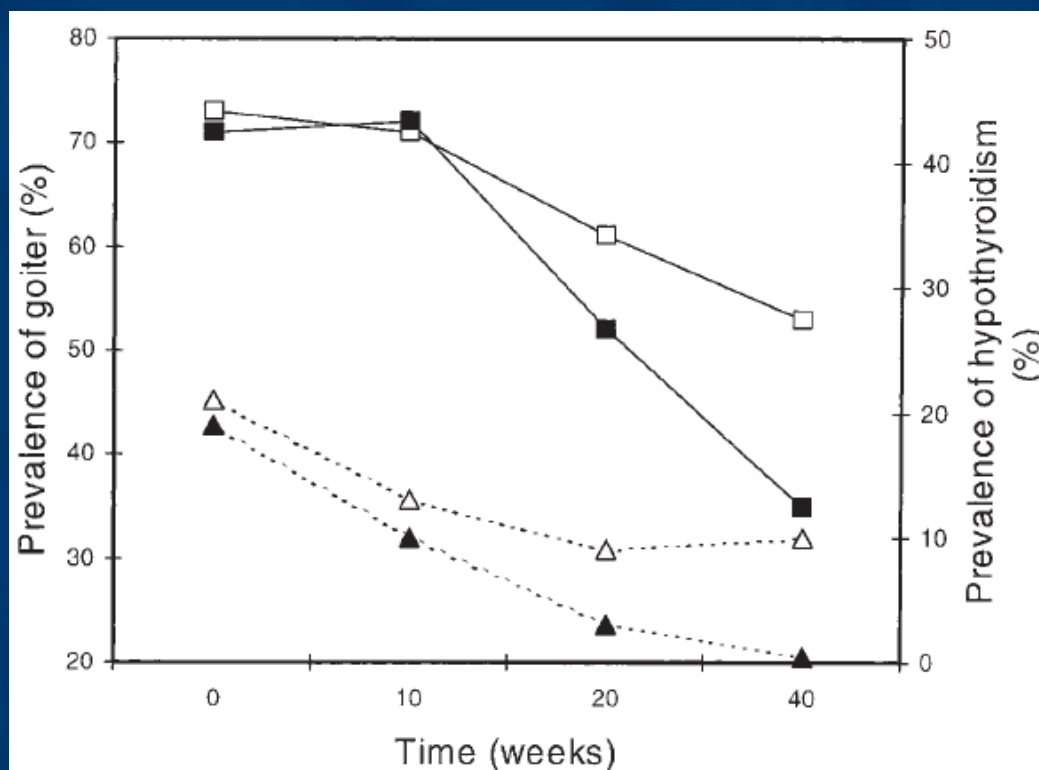
- ↗ use of oral rehydration solutions
 - Promoting maternal breast-feeding
 - Nutritional support
-
- ↘ post-neonatal (1-11mo) mortality: 47%
 - ↘ infantile mortality (12-59mo): 69%
-
- Use of ATB remains high: 32,9% (urban, 1995)

CLINICAL STUDY

Addition of microencapsulated iron to iodized salt improves the efficacy of iodine in goitrous, iron-deficient children: a randomized, double-blind, controlled trial

Michael B Zimmermann, Christophe Zeder, Nourredine Chaouki¹, Toni Torresani², Amina Saad¹ and Richard F Hurrell

The Human Nutrition Laboratory, Swiss Federal Institute of Technology, Zürich, Switzerland, ¹The Ministry of Health, Rabat, Morocco and ²The Department of Endocrinology, University of Zürich Children's Hospital, Zürich, Switzerland



Interactions between iron and vitamin A, riboflavin, copper, and zinc in the etiology of anemia

*Laboratory for Human Nutrition, Swiss Federal Institute of Technology, Zurich, Switzerland
Contact: michael.zimmermann@ilw.agrl.ethz.ch*

- **Vit A deficiency**
 - Impaired erythropoiesis+++
 - Repletion → redistribution of Fe from stores to BM
 - **Systematic supplementation** (National Program)
- Riboflavin
- Copper:
 - Rare → unlikely of public Health importance
- Zinc
 - • May impair iron efficacy



PETER PAUL RUBENS (c.1630)

"DAVID SLAYING GOLIATH"

IMAGE © 2002 — RON REZNICK