

NICARAGUA MINISTRY OF HEALTH

**INTEGRATED SYSTEM FOR  
NUTRITION PROGRAM MONITORING  
AND EVALUATION (SIVIN)**

BRIEF REVIEW OF THE  
EXPERIENCE AFTER 3 YEARS OF  
IMPLEMENTATION (2003-2005)

Jose O. Mora, M.D.

# Objectives of SIVIN

- Monitor program process/performance
- Monitor outcomes through periodic assessment of biological indicators
- Inform policy and program decisions for improved effectiveness

# **Sources of Information**

## **HEALTH SERVICE STATISTICS**

**Coverage of vitamin A and de-worming medications**

## **INTERNAL PROGRAM MONITORING SYSTEMS**

**Food Control (Regulatory monitoring) of fortified foods in plants/stores**

**Breastfeeding promotion activities**

**Growth monitoring/education activities**

# **NATIONAL HOUSEHOLD SURVEY**

## **PROCESS MONITORING**

**Iron/folate supplementation coverage**

**Household monitoring of fortified foods**

**Breastfeeding practices**

## **EFFECTIVENESS MONITORING**

**Anemia, vitamin A, iron and iodine deficiencies**

**Morbidity, AGP**

**Nutritional anthropometry of children and women**

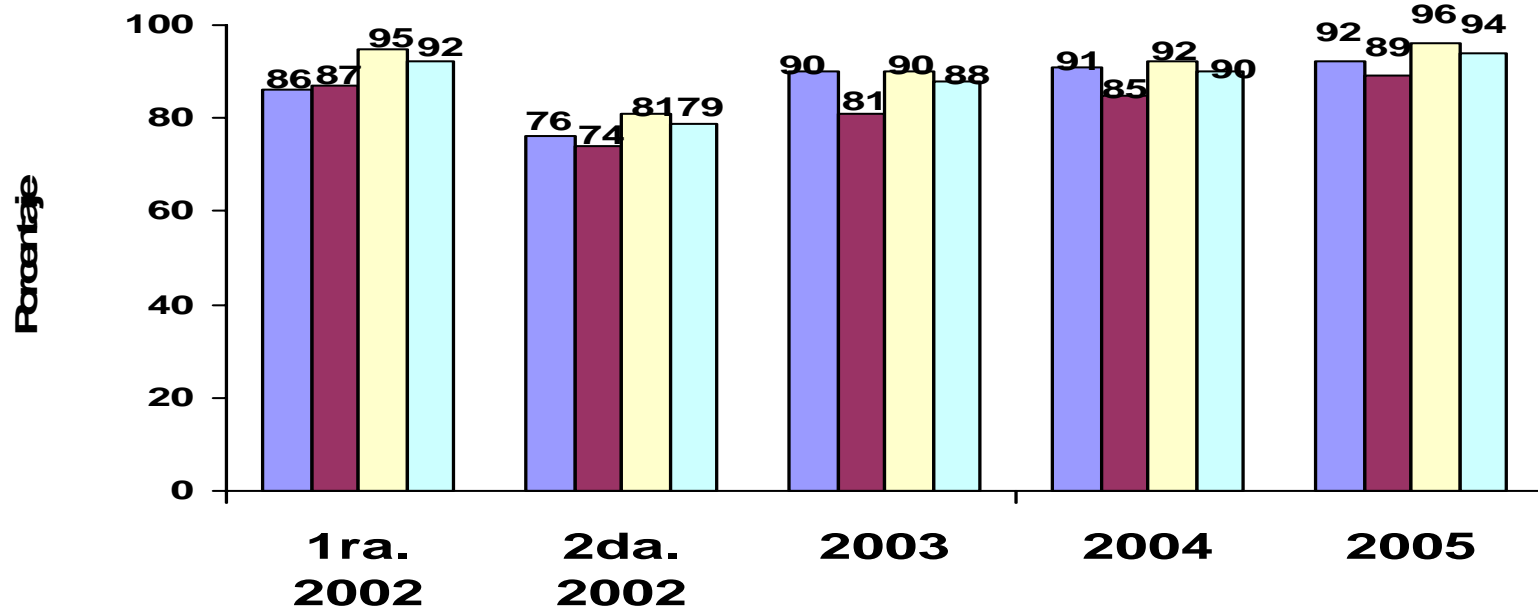
# Household Survey Methodology

- Random selection of 150 clusters (1,500 households) with children <5 years) to be covered in 3 years  
Randomly selected annual sub-sample (50 clusters)
- Field work one week per month to cover 5 clusters  
Data collection by three rotating teams  
Training standard methodology, quality control
- Survey questionnaire  
Anthropometry  
Blood, urine, and food samples
- Laboratory analysis at INCAP & MOH

# Data Processing and Analysis

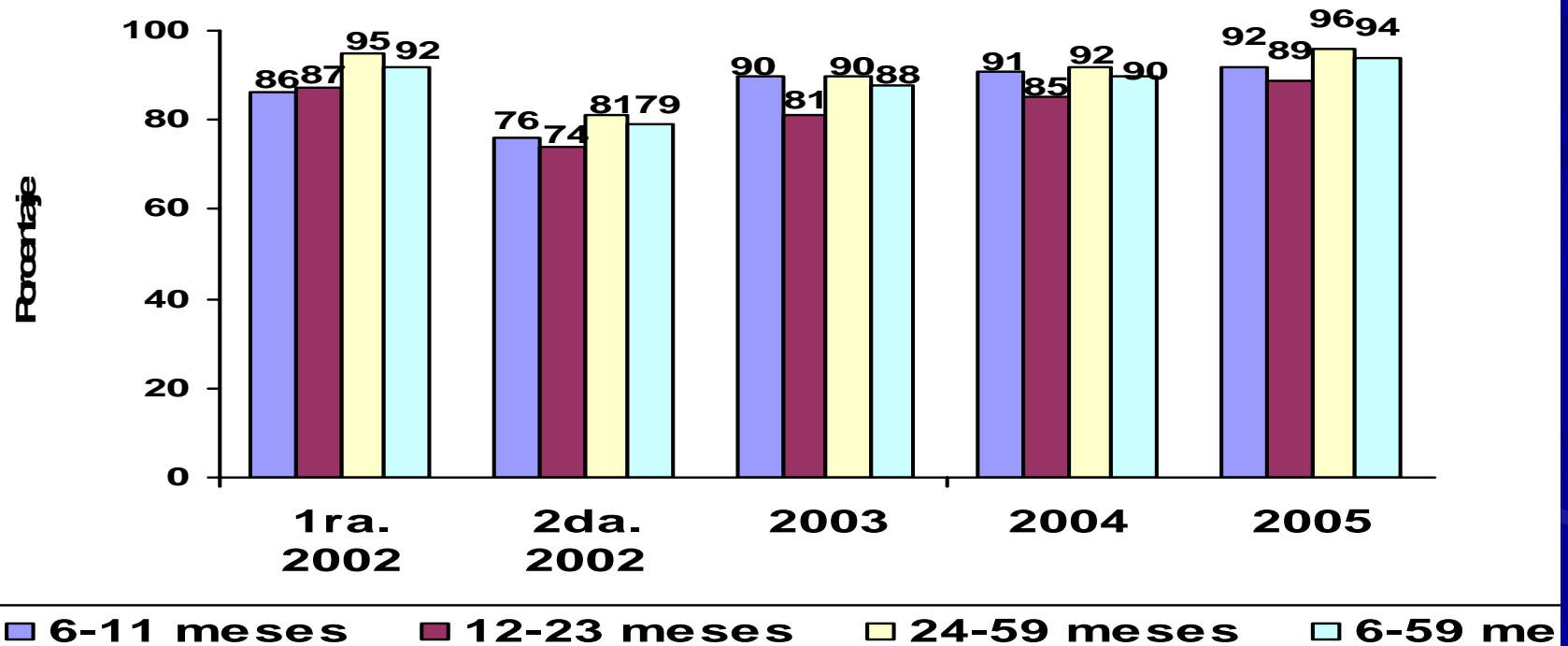
- Duplicate data entry in EPI-INFO databases
- Data cleaning and integrated analysis
- Adjusted national rates for most indicators
- Annual and 3-year report with regional breakdown of rates; time trends

# Coverage of VAS supplementation in children 6-59 months, 2003-2005

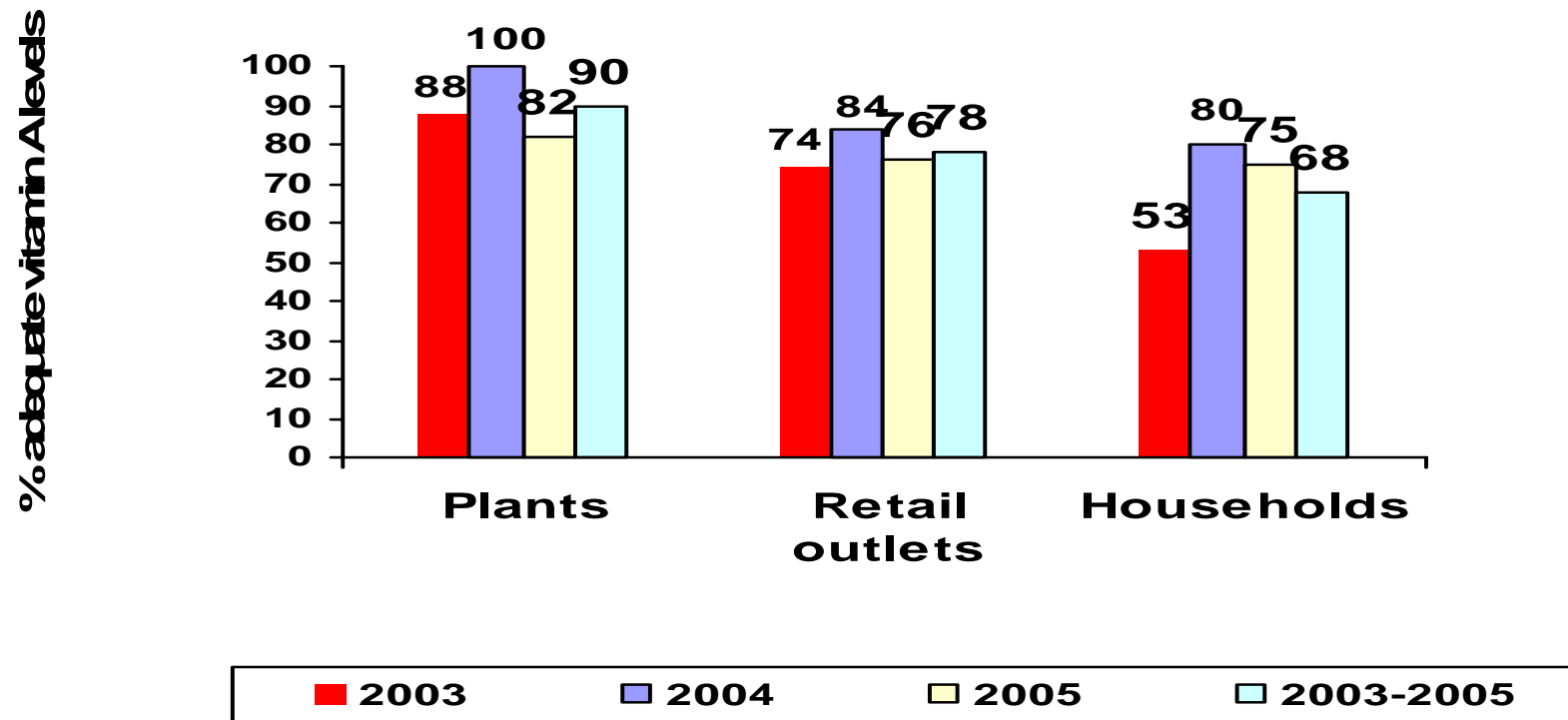


■ 6-11 meses ■ 12-23 meses ■ 24-59 meses ■ 6-59 me

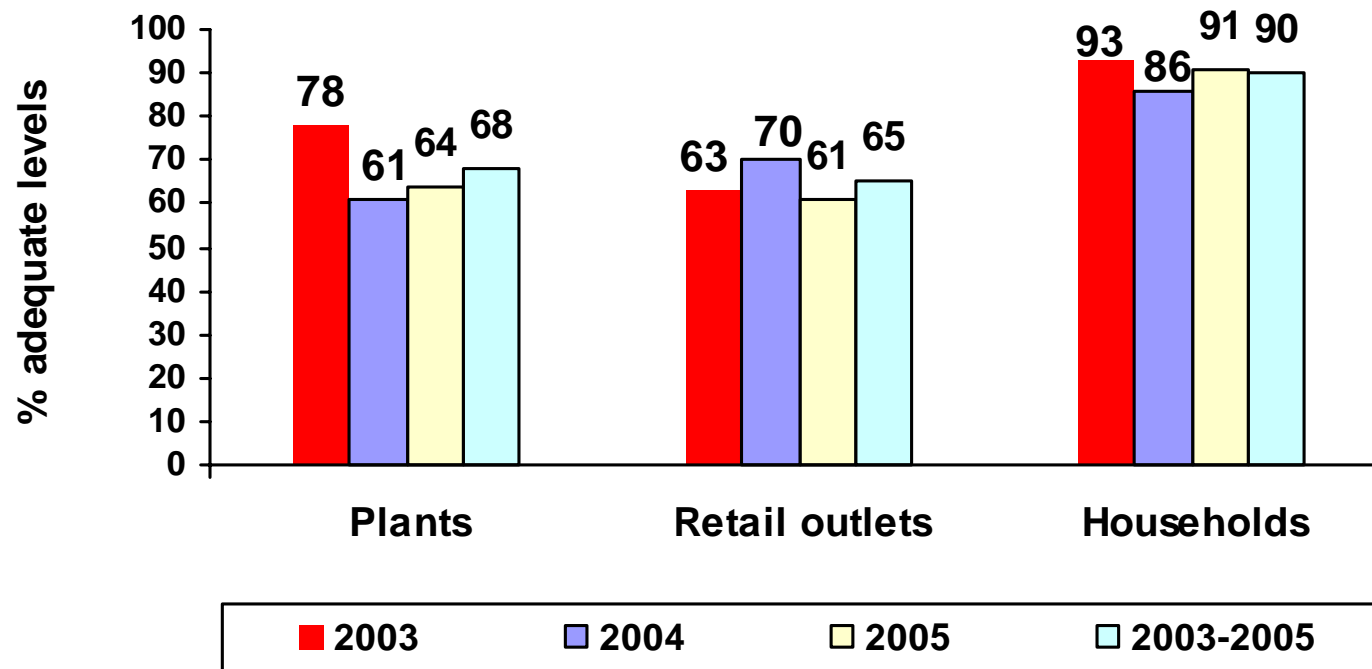
# Coverage of deworming medications in children 2-4 years, 2003-2005



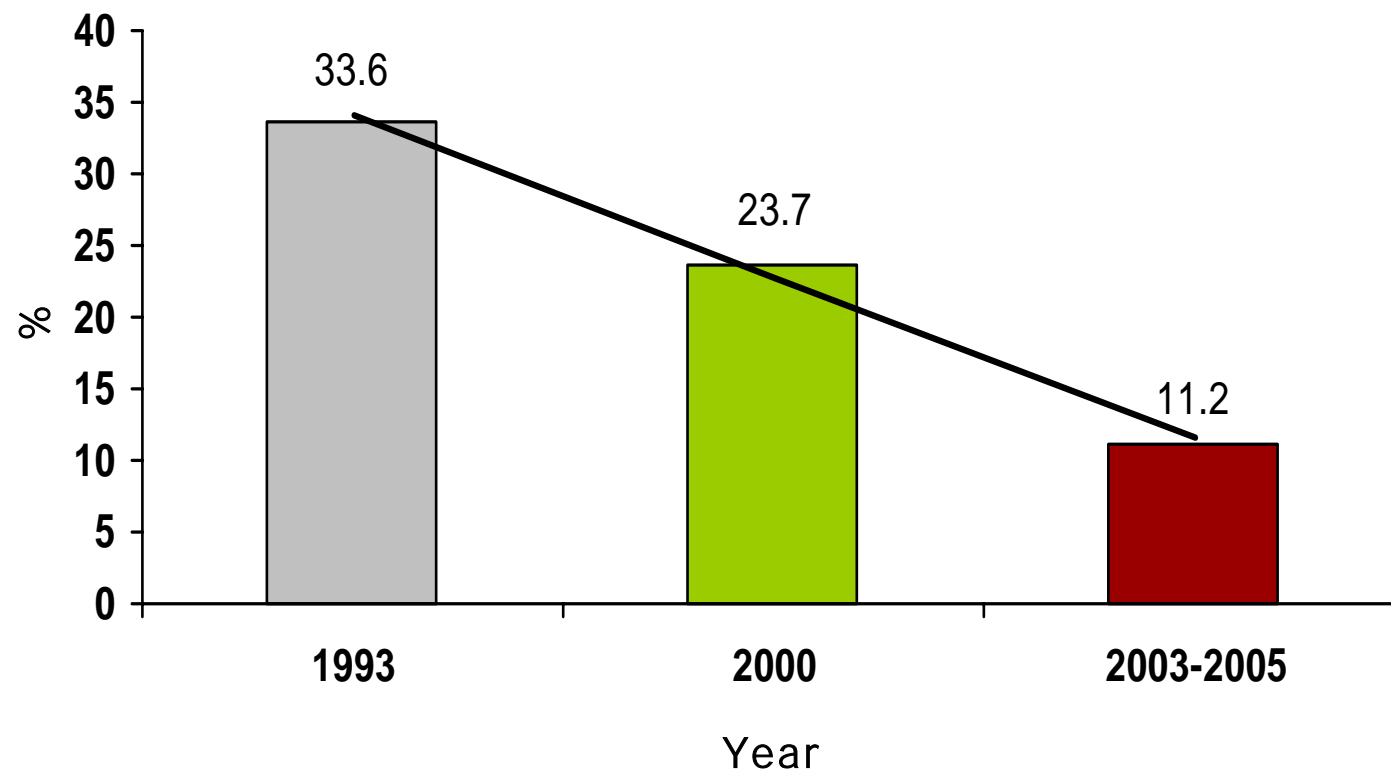
# Coverage of adequate levels of vitamin A in sugar, 2003-2005



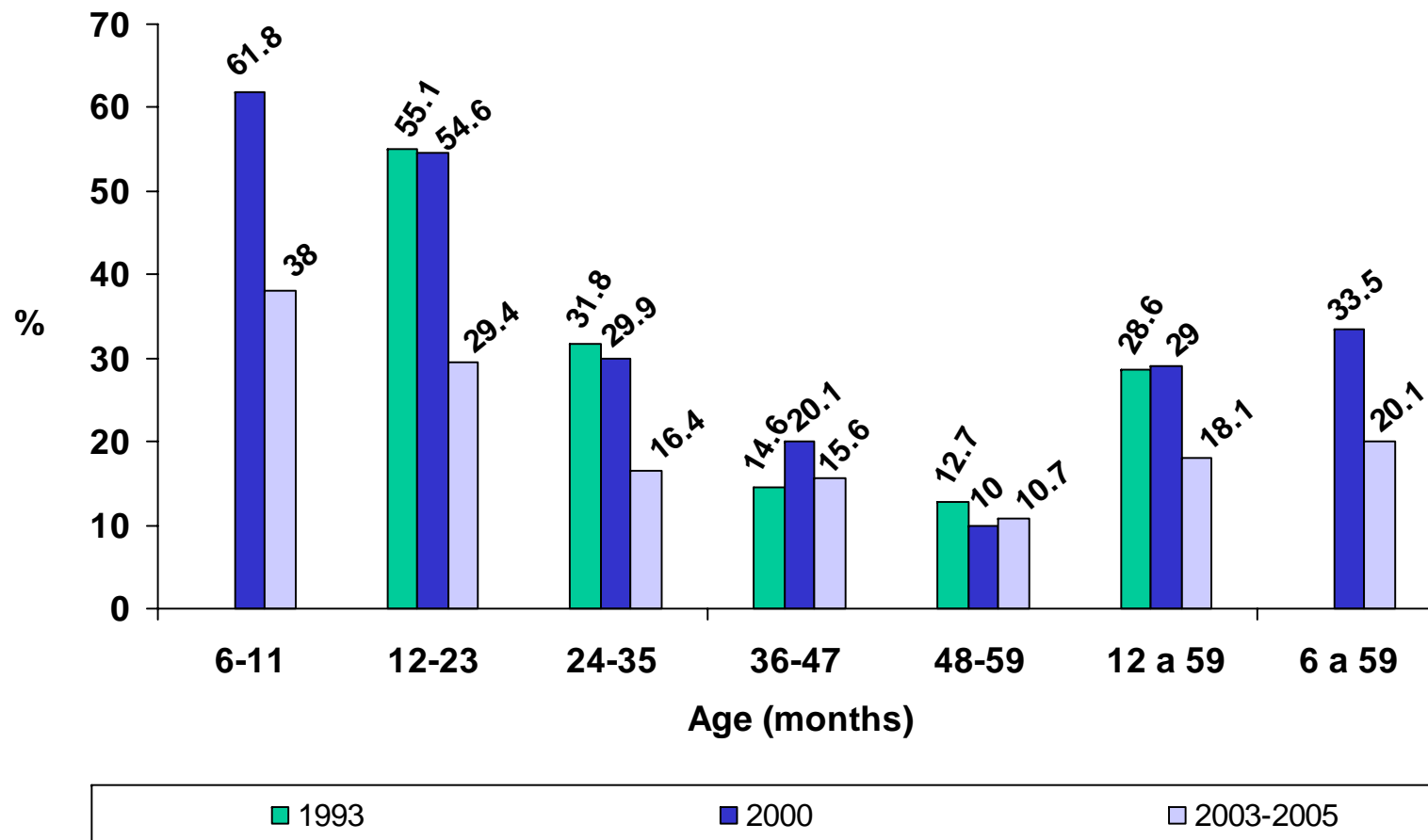
# Coverage of adequate levels of iodine in salt, 2003-2005



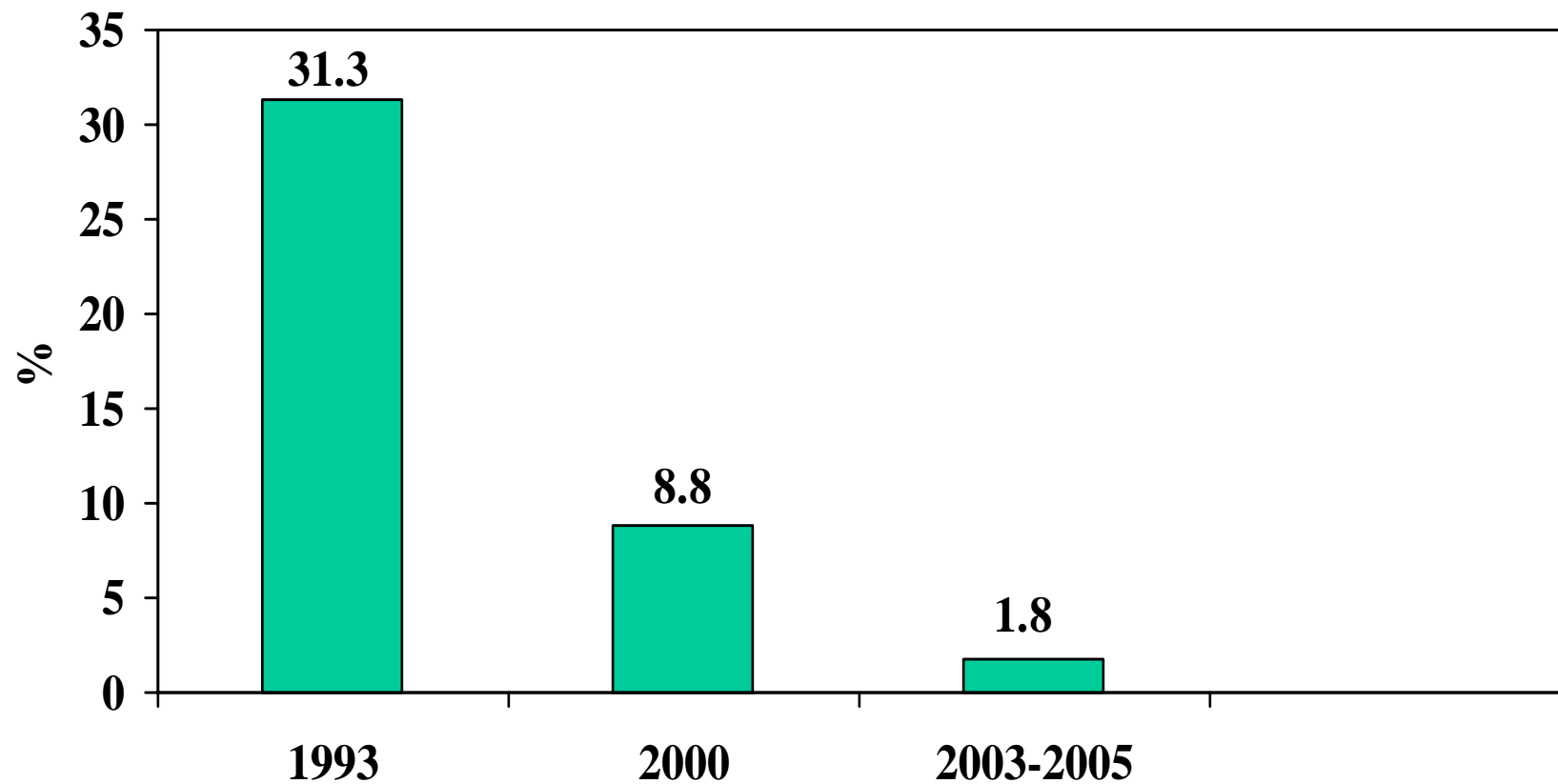
# Trend in prevalence of anemia in women 15-49 years, 1993-2005



# Trend in prevalence of anemia in children, 1993-2005



# Trend in prevalence of VAD children 6-59 months, 1993-2005



# Information Dissemination and Use

- Detailed annual reports and brochures
- Technical workshops with decision-makers
- Discussion of policy and program implications of the results
- Dissemination at district and local levels

# Conclusions/Lessons Learned

- **M&E systems, critical for policy and program decision making**
- **Reliable service statistics would reduce the need for especial household surveys**
- **Impact evaluation may be contingent upon evidence of adequate program implementation**
- **Capacity building & external technical and financial assistance may be needed**