

Iron Supplementation for Young Children: We Must Certainly Do More!

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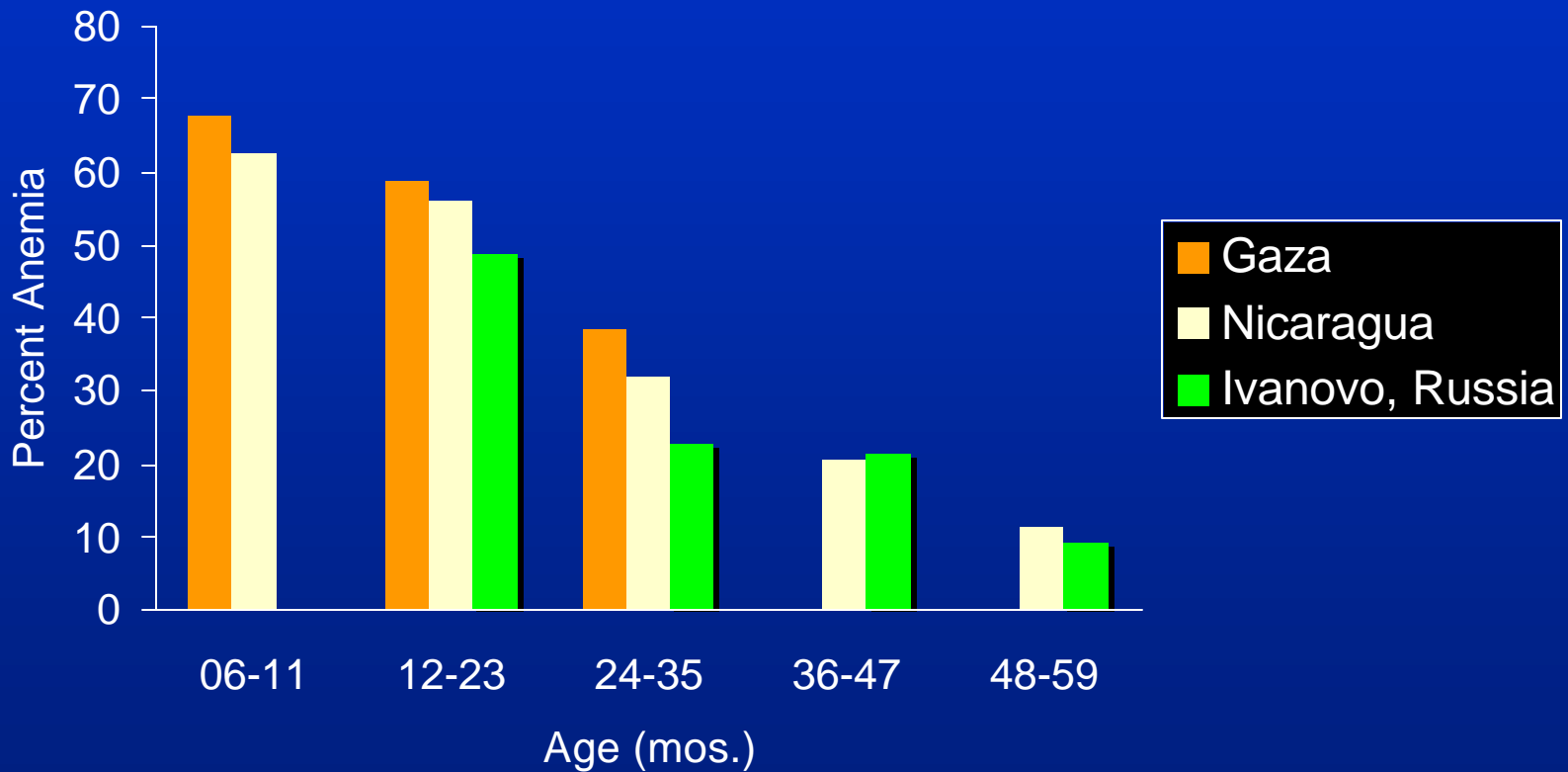
Atlanta May 7, 2001



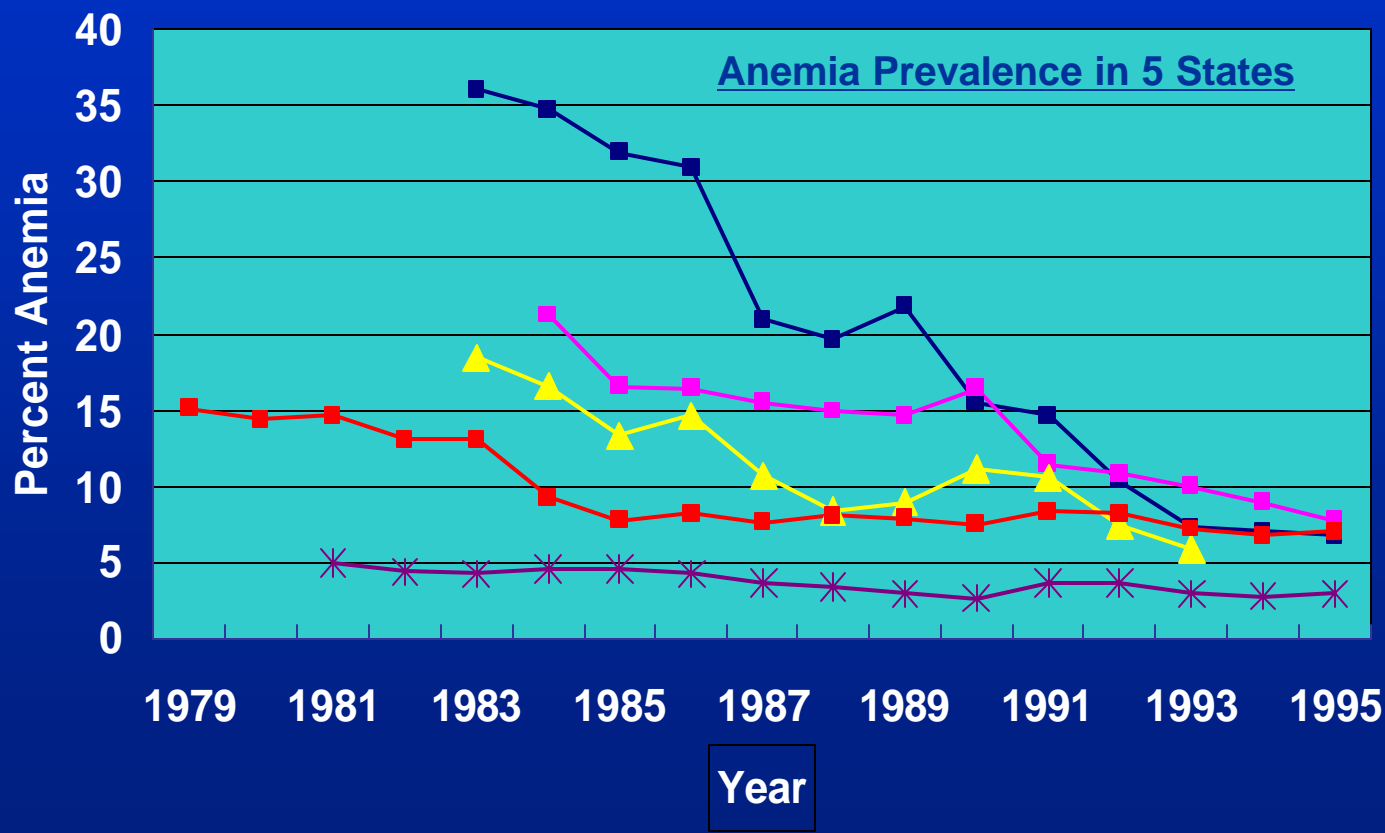
Infant Iron Needs Difficult to Meet

| | <u>Daily Iron Need</u> | <u>Daily Caloric Intake</u> |
|------------------------|------------------------|-----------------------------|
| Infants (4 -12 mos) | 0.8-1.0 mg | 700-900 Kcal |
| Women | 1.5 mg | 1500-2000 Kcal |
| Men | 1.0 mg | 2100-3000 Kcal |

Significantly Compromised Iron Status of Children <24 Months Old



Declining Trend in Iron Deficiency in U.S. Infants and Children



Source: Sherry, B. et al. Pediatrics 107:677, 2001

Why Pediatric Iron Deficiency Low in U.S. But High in Developing Countries?

U.S.

- ◆ Meats and Vit. C rich foods readily available
- ◆ Widespread use of iron fortified infant foods
- ◆ National nutrition program (WIC) targets under 5 year olds
- ◆ Varieties of supplements readily available

Developing Countries

- ◆ Primarily cereal based diet ... low in iron
- ◆ Little or no iron fortified infant foods available
- ◆ Food diversification often impractical
- ◆ Low cost supplements not widely available

Why So Few Programs to Prevent and Control Iron Deficiency in Children?

- ◆ 1990 World Summit Goals did not specify reducing IDA in children
- ◆ Policy makers unaware of impact of iron deficiency on children's cognitive development
- ◆ Lack of data on pediatric iron deficiency at national levels contributed to lack of advocacy
- ◆ High anemia prevalence in children attributed to non-nutritional causes, e.g. parasites and genetics
- ◆ Unfounded concern about increasing iron intake

How to Successfully Deliver Iron Supplements to Infants and Young Children

Lessons From Pregnancy Supplementation Programs

- ◆ Low health care coverage
- ◆ Supplements not regularly available in health facilities or through alternate sources
- ◆ Products not formulated based on consumer preference
- ◆ Health care providers not always supportive of preventive supplementation
- ◆ Very weak, if any, communication and promotion components to programs

Adapted from: Improving the Quality of Iron Supplementation Programs: The MotherCare Experience. John Snow, Inc.



Relevant CDC Experiences

Gaza

- ◆ Anemia perceived as illness, and supplement as medication to be taken only when sick
- ◆ Much more support for preventive supplementation when informed about cognitive consequences of iron deficiency

Azerbaijan

- ◆ Injections perceived as better than orally administered products

Relevant CDC Experiences

Russia

- ◆ Vitamins perceived as “good for health and well being”; value of iron unknown

China

- ◆ “Free” supplements (folic acid) not valued
- ◆ Strong promotion activity resulted in 80% - 90% coverage and excellent compliance through sale of supplements

Another Practical Issue: Cost of International Procurement of Liquid Ferrous Sulfate

- 48,250 bottles (30 ml) @ \$0.31 = **\$14,958**
- Shipping cost = **\$16,398**

Total cost is more than twice the cost of product alone!!!

Encouraging Product Developments



Micronutrient Sprinkles



Multi-micronutrient Foodlet

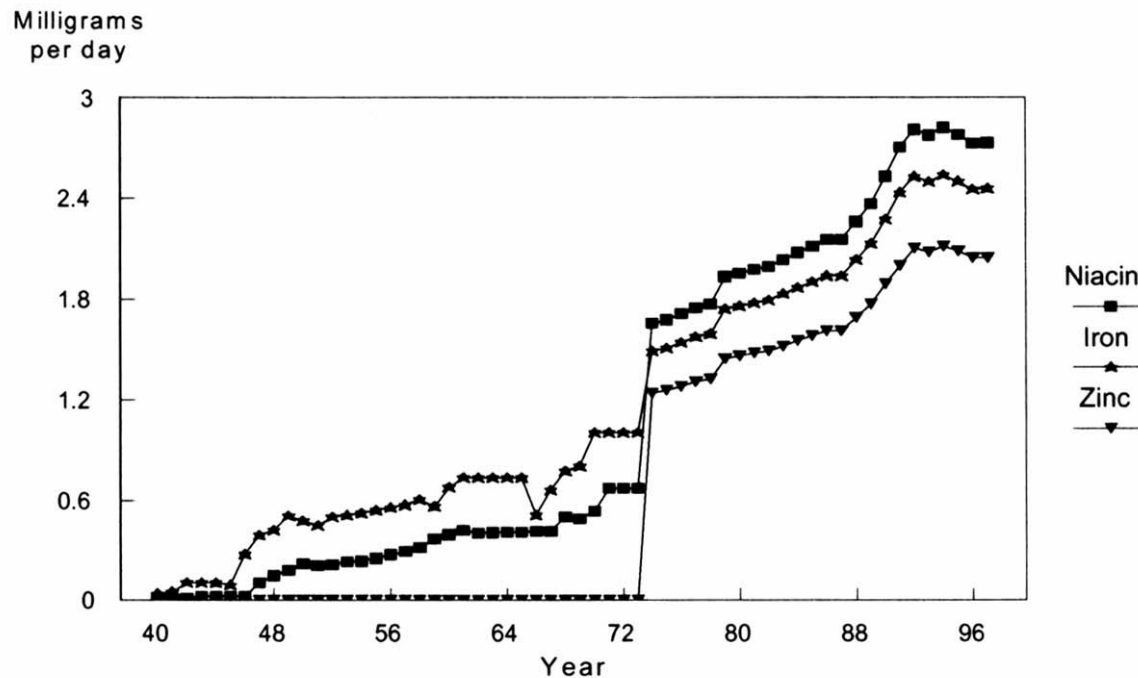
Need More Reliable and Efficient Product Distribution Systems

Valuable Lessons from U.S. WIC Program

- ◆ Program participants receive foods that meet specified nutrient requirements
- ◆ Food companies develop products based on program requirements and distribute them nationwide through own networks
- ◆ Foods ***not provided*** through health clinics, but obtained in local stores in exchange for special coupons
- ◆ Same foods available for additional purchase by program participants and the general public

Impact of the U.S. WIC Program

Fortification Trends of Ready-to-Eat Cereals for Niacin, Iron, and Zinc, 1940-1997



Source: Home Econ. Research Rprt. No. 54, USDA, 2001

Elements Needed for Successful Supplementation Programs for Young Children

Global Actions

- ◆ Ensure world leaders adopt international goal to reduce iron deficiency in children < 24 months old
- ◆ Increase coordination of international efforts to develop supplements for children
 - Involve public and private sectors across all regions for production and distribution (use ORS model)
 - Set timeline for global availability of affordable pediatric supplements
- ◆ Ensure role of supplements in complementary feeding
- ◆ Improve technical assistance on financing, distribution, and promotion of supplement use
- ◆ Network on-going developments and lessons learned

- ◆ Accelerate product development
- ◆ Support local production



Micronutrient Sprinkles



Multi-micronutrient Foodlet

National Actions

- ◆ Develop models for financing pediatric supplements
 - Public, private, community and family
- ◆ Develop efficient and accessible distribution systems
 - Partnerships with private sector essential to ensure adequate logistics
 - Encouraging micro-enterprise systems could have additional community benefits
- ◆ Implement strategy for sustained promotion
 - Assure formative research
 - Use IEC lessons learned elsewhere
 - Develop private sector and NGO partnerships

National Actions

- ◆ Update medical and health education and training on iron deficiency prevention and control
- ◆ Link monitoring to improving program management
- ◆ Share lessons learned nationally and internationally