



MADAGASCAR

National Anemia Profile



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and Innovations in Nutrition Globally

In pregnancy, infections are a key cause of anemia and can be prevented by sleeping under a bednet and taking intermittent preventive treatment (IPTp) for malaria and deworming pills.



In pregnancy, anemia can be prevented by taking iron folic acid (IFA) supplements.

In 2008-2009, only **7.6%** of pregnant women in Madagascar consumed 90 or more IFA tablets

Not enough women are taking IPTp to prevent malaria during pregnancy in malaria-endemic areas (**18%**, 2013)

For infants, young children, and mothers, delayed cord clamping, sleeping under a bednet, exclusive breastfeeding, and birth spacing reduce the risk of becoming anemic.



Anemia can be prevented across the lifespan

51% of infants in Madagascar are exclusively breastfed during the first six months after birth (2008-2009)

In 2008-2009, **46%** of children 6-35 months consumed foods rich in iron*

For young children, continued breastfeeding and adequate complementary feeding (including micronutrients), preventing and treating malaria, and taking deworming pills can prevent anemia and promote healthy growth.



In adolescence, IFA supplements and deworming pills help prevent anemia. Family planning delays the age at first birth.



More than one out of four (**27%**) married adolescent girls expressed an unmet need for family planning (2008-2009)

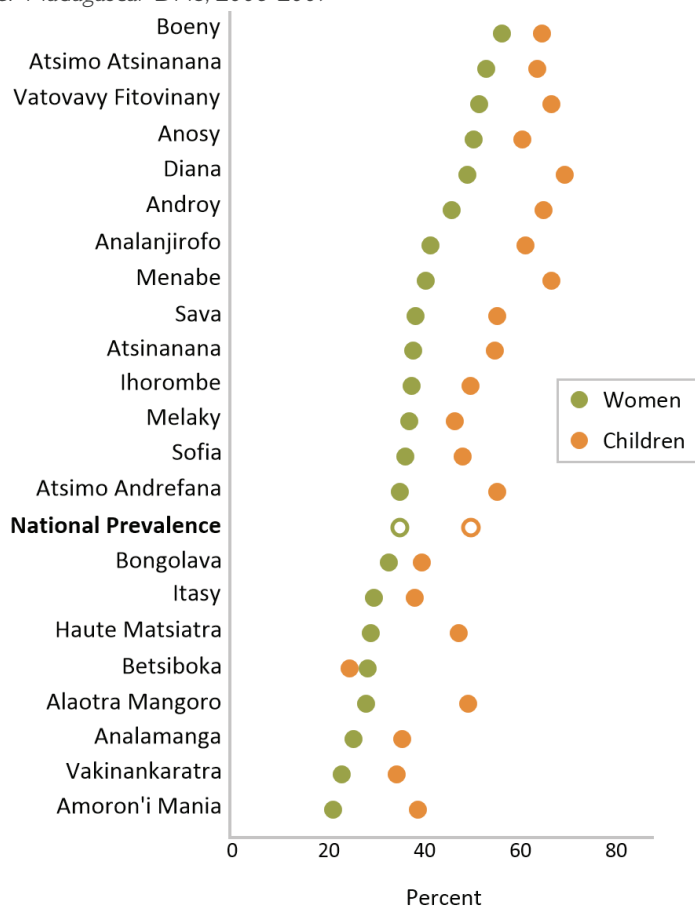
*Includes meat (including organ meat), fish, poultry, and eggs

A multisectoral approach to prevent anemia will save lives and improve the wellbeing of mothers, infants, and children

Anemia has substantial negative effects on the health and economic wellbeing of nations and communities. Children with anemia experience irrevocable cognitive and developmental delays and exhibit decreased worker productivity as adults.¹ Globally, maternal anemia increases the risk of pre-term delivery and low birth weight, and iron-deficiency anemia underlies 115,000 maternal deaths and 591,000 perinatal deaths each year.²

Prevalence of anemia among children 6-59 months and women 15-49 years, by region

Source: Madagascar DHS, 2008-2009



1. Walker, S. P., T. D. Wachs, J. M. Gardner, B. Lozoff, G. A. Wasserman, E. Pollitt, and J. A. Carter. 2007. "Child development: risk factors for adverse outcomes in developing countries." *Lancet*, 369(9556): 145-157.

2. Stoltzfus, R. J., L. Mullany, and R. E. Black. 2004. "Iron Deficiency Anemia." In *Comparative Quantification of Health Risks: Global and Regional Burden of Disease Attributable to Selected Major Risk Factors*. M. Ezzati, A. D. Lopez, A. Rodgers, and C. J. L. Murray, eds. Geneva: World Health Organization.

Trends in the prevalence of anemia in Madagascar

Children 6-59 months of age

■ mild ■ moderate ■ severe

2003-2004



2008-2009



The DHS hemoglobin levels used to diagnose anemia in children 6-59 months in grams/dL are: Mild 10.0-10.9; Moderate 7.0-9.9; Severe <7.0; Any <11.0.

Women 15-49 years of age

2003-2004



2008-2009



The DHS hemoglobin levels used to diagnose anemia in non-pregnant women 15-49 years of age in grams/dL are: Mild 10.0-11.9; Moderate 7.0-9.9; Severe <7.0; Any <12.0.

Status of Policies or Strategies to Support Reductions in Anemia*

- | | |
|--|--|
| <input checked="" type="checkbox"/> IFA for pregnant women | <input checked="" type="checkbox"/> Long-lasting insecticidal nets (LLINs) for household use |
| <input checked="" type="checkbox"/> IFA for women of reproductive age | <input checked="" type="checkbox"/> Indoor residual spraying |
| <input checked="" type="checkbox"/> IFA for adolescent girls | <input checked="" type="checkbox"/> National policy on sanitation |
| <input checked="" type="checkbox"/> Iron and/or folic acid fortification legislation | <input checked="" type="checkbox"/> IPTp for pregnant women |
| <input checked="" type="checkbox"/> Delayed cord clamping | <input checked="" type="checkbox"/> Malaria diagnosis and treatment |
| <input checked="" type="checkbox"/> Dietary diversity for complementary feeding | <input checked="" type="checkbox"/> Deworming for children |
| <input checked="" type="checkbox"/> Micronutrient powders for children | <input checked="" type="checkbox"/> Deworming for pregnant women |
| | <input checked="" type="checkbox"/> Breastfeeding |

- | | |
|---|--|
| <input checked="" type="checkbox"/> no policy | <input type="checkbox"/> policy pending |
| <input checked="" type="checkbox"/> policy in place | <input type="checkbox"/> missing documentation |

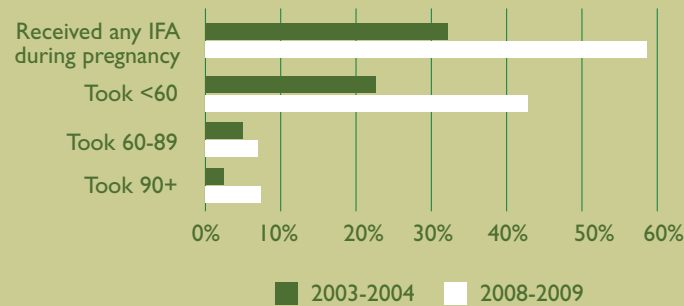
*Information from the Global database on the Implementation of Nutrition Action (GINA) (<https://extranet.who.int/nutrition/gina/en>) or country documentation. The status of policies and strategies have been identified to the best of our knowledge. Revisions and updates are welcome.

Evidence-informed WHO guidance can be found here: <http://www.who.int/elena/en/>

Anemia is a Preventable Condition—Simple Interventions Can Have a Huge Impact

Increase iron uptake and stores

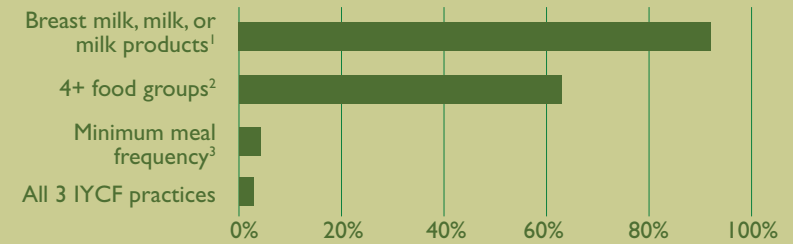
IFA supplementation among pregnant women increased from 2003-2004 to 2008-2009



Contraception use steadily increased among married women from 1997 to 2008-2009



Few children 6-23 months old were fed according to 3 key Infant and Young Child Feeding (IYCF) practices in 2008-2009

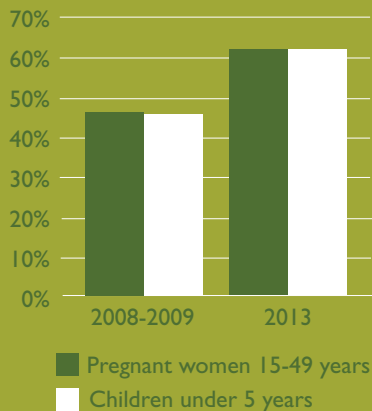


- ¹ Continued breastfeeding, or feeding of milk/milk products to non-breastfed children
- ² Feeding children solid foods, semi-solid foods, and milk products from the minimum number of food groups
- ³ Feeding children solid foods, semi-solid foods, and milk products the minimum number of times

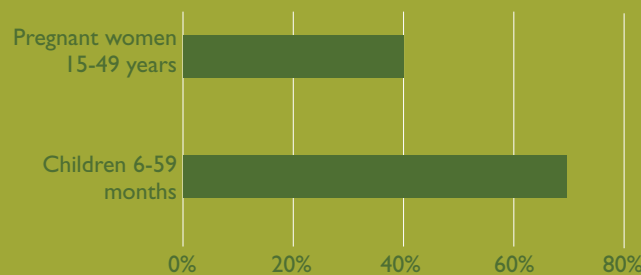


Reduce iron losses and infection

Long-lasting insecticidal net (LLIN) and insecticide-treated mosquito net (ITN) use increased from 2008-2009 to 2013*

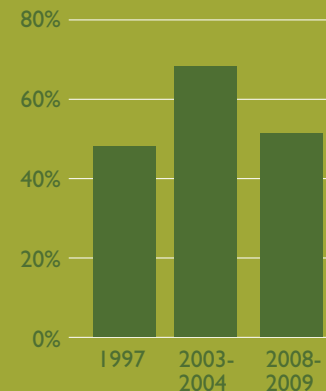


The percentage of children and women who received deworming medication was moderate in 2008-2009*

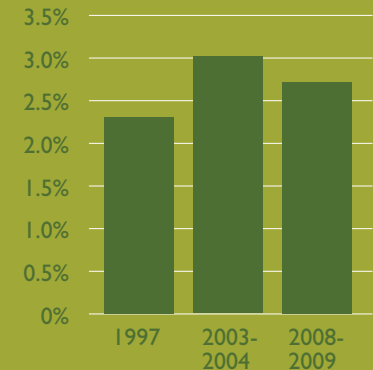


*Deworming medication given in past 6 months for children and during last pregnancy for women

Exclusive breastfeeding of children <6 months decreased since 2003-2004



Very few households have an improved latrine/toilet*



*Definition of 'improved latrine/toilet' has changed slightly across years. See Demographic and Health Surveys.

*Percentage who slept under an LLIN (2013) or ITN (2008-2009) the night before the survey

Multiple Sectors Play a Role in Anemia Prevention and Treatment

Stunting and anemia share similar risk factors and are responsive to many of the same interventions

Agriculture

- Increase income and reduce poverty
- Production of biofortified and iron-rich crops
 - Small livestock/poultry
 - Dietary diversity

Health

- Iron supplementation
 - Deworming
- Breastfeeding and complimentary feeding
- Family planning
- Malaria prevention and treatment
- Delayed cord clamping

Water and Sanitation

- Improved latrines
 - Handwashing
- Access to clean water
- Livestock management
 - Infectious disease prevention

Education

- Female literacy
- Health education
- Hygiene education
- Family planning education
- Nutrition education

Data Sources:

Institut National de la Statistique (INSTAT), Programme National de lutte contre le Paludisme (PNLP), Institut Pasteur de Madagascar (IPM) et ICF International. 2013. Enquête sur les Indicateurs du Paludisme (EIPM) 2013. Calverton, MD, USA: INSTAT, PNLPIPM et ICF International.

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