Conceptual Frameworks for Anemia

Washington, DC | October 18, 2013













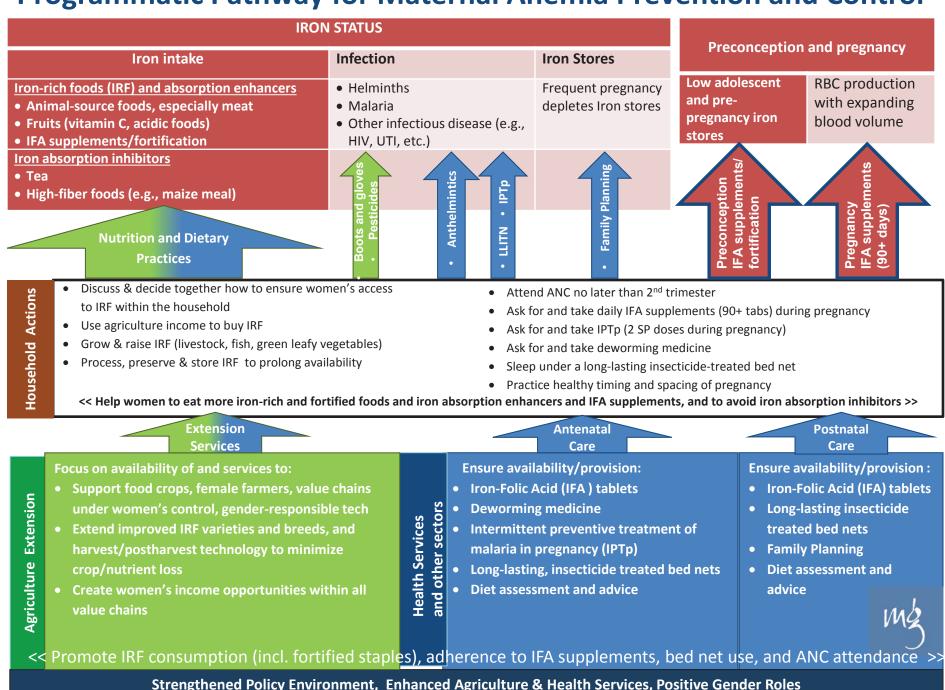


Causes and Consequences of Maternal and Child Anemia Increased Increased risk of Impaired Increased Reduced work maternal and poor pregnancy motor and early neonatal productivity CONSEQUENCES perinatal outcomes: precognitive and child and economic term births, LBW mortality development mortality development and PPH Maternal and Child Anemia Common Other Malaria & HIV & infections, & other Genetic Iron DIRECT vitamin **Tuberculosis** inflammatory **CAUSES** deficiency helminthes disorders deficiencies conditions Inadequate access Inadequate High number Inadequate Inadequate to nutrient-rich use of curative and care practices maternal & **UNDER**diets and intake of & preventive inadequate and water, child care LYING mothers and health spacing of hygiene and practices **CAUSES** children births services sanitation Socio-cultural and economic conditions and policies

Source: Adapted from UNICEF 1990 and Ruel 2008.

LBW = Low birth weight, PPH = Postpartum Hemorrhage

Programmatic Pathway for Maternal Anemia Prevention and Control



PROGRAMMATIC PATHWAYS FOR CHILD ANEMIA PREVENTION AND CONTROL

Iron intake	Infection	Iron stores
 Iron-rich foods (IRF) and absorption enhancers Animal source foods, esp. liver, red meat Other sources of iron leafy greens, beans Fruits (vitamin C, acidic foods) Iron/multiple micronutrient supplements as appropriate 	 Helminths Malaria Diarrheal disease and other infectious disease (incl. HIV & TB) 	Low iron stores at birth
Iron absorption inhibitorsTea, high-fiber foods (e.g. maize meal)	WaSH Worming LLINs	Delayed cord clamping Nutrition suppo
Nutrition & Dietary Practices	Dewe Line Control of the Control of	Nutr

- Ensure children's access to IRF and iron absorption enhancers in the household
- Provide appropriate, diverse complementary foods beginning at 6 months
- Use agriculture income to buy IRF
- Grow and raise IRF (livestock, fish, green leafy veg)
- Process, preserve, store IRF to prolong availability

- · Exclusively breastfeed children for the first 6 months
- Continue breastfeeding to age 24 months or longer
- Provide iron/multiple micronutrient (MMN) supplements (incl. powders) to children as appropriate
- Practice proper sanitation, hygiene, food safety.
- Sleep under long-lasting insecticide treated bed nets (LLINs)
- Take children to immunization days & well-child visits
- Nutrition and health support for PLW (pregnant and lactating women), infants, and young children

Agriculture-Nutrition Extension Services



Child health care

Increased production, affordability, and accessibility of iron-rich food crops and animal source foods Harvest and postharvest technology to minimize crop

- Harvest and postharvest technology to minimize crop and nutrient loss
- Improved IR varieties and breeds
- Improved value chains for livestock and horticulture
- Fortification of staple foods with iron, vit A, & folic acid
- Support women's income opportunities and genderresponsible labor-saving technology

Health Services and other sectors

- Iron supplementation (tablets, syrups, powders)
- Prevention and treatment of malaria and infectious diseases
- Routine deworming, vaccinations, and vitamin A supplements
- Nutritional support for PLW and adolescent girls
- Counseling for optimal infant & young child practices
- Long-lasting insecticide treated bed nets (LLINs)
- Management of severe acute malnutrition
- Promotion of food safety, hygiene, sanitation
- Delayed cord clamping for newborns

Agriculture Extension Household Actions