WHO Global Consultation on WIFS in women of reproductive age: Its Role in Promoting Optimal Maternal and Child Health (Manila, Philippines in April 2007)[1]

A. BACKGROUND

- Anaemia is caused by multiple factors, but iron deficiency and infections are the most common. Other factors include: nutritional deficiencies of vitamin A and B_{12}, folate and riboflavin and blood disorders (e.g. thalassemias* and haemoglobinopathies*).
- Global prevalence of anaemia is 30% and 47% in non-pregnant and pregnant women, respectively[2].
- Weekly, as opposed to daily, iron supplementation may be a more efficient preventive approach because: 1) it has fewer side effects; 2) it is easier to manage at the community level; and 3) it is more sustainable.
- Improving iron and folate nutrition of women of reproductive age could improve pregnancy outcomes (e.g. reduced risk of neural tube defects (NTDs) in infants[3]), reduce neonatal mortality[4] AND enhance maternal and infant health.
- Recommendation is to use WIFS in appropriate settings (see Section C) where necessary program monitoring is feasible.

B. EVIDENCE OF WIFS PROGRAMS IMPROVING IRON AND FOLATE STATUS BEFORE AND DURING EARLY MONTHS OF PREGNANCY

WIFS may ensure adequate iron status of women, particularly before and during the first three months of pregnancy, in communities where food-based strategies are not fully implemented or effective.

- Short- and medium-term WIFS reduced the prevalence of anaemia among women of reproductive age in several community settings where there was good compliance among women[5].
- Studies demonstrate improvement in iron status when supplementation is continued for periods ranging from 12 weeks, up to two years[6].
- Weekly vs. daily supplementation with 60 mg of iron had similar impact, except in severely anaemic women[7].

C. CONSULTATION RECOMMENDATIONS

Recommended conditions under which WIFS, provided before and during pregnancy, may be implemented effectively and is most likely to have significant impact on iron and folic acid status:

1) Mass fortification of staple foods with iron and folic acid are unlikely to be implemented within 1-2 years
2) Prevalence of anaemia is >20% among women of reproductive age

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* when hemoglobins are abnormal

[1] WHO. *Weekly iron-folic acid supplementation (WIFS) in women of reproductive age: its role in promoting optimal maternal and child health. Position statement.* Geneva, World Health Organization, 2009 (http://www.who.int/nutrition/publications/micronutrients/weekly_iron_folicacid.pdf, accessed 30 September 2009).

[2] de Benoist et al., eds. *Worldwide prevalence of anaemia 1993-2005. WHO Global Database on Anaemia.* Geneva, World Health Organization, 2008 (http://whqlibdoc.who.int/publications/2008/9789241596657_eng.pdf, accessed 3 February 2009).

[3] Botto LD et al. Neural-tube defects. New England Journal of Medicine. 1999; 341:1509-19.

[4] Christian P, Stewart C, LeClerq S, Shrestha S, Wu L, West Jr. K, Khatry S. Antenatal and postnatal iron supplementation reduces childhood mortality in rural Nepal: A prospective follow-up in a randomized, controlled community trial. American Journal of Epidemiology. 2009; 170(9):1127-1136.

[5] WHO. *Weekly iron-folic acid supplementation (WIFS) in women of reproductive age: its role in promoting optimal maternal and child health. Position statement.* Geneva, World Health Organization, 2009 (http://www.who.int/nutrition/publications/micronutrients/weekly_iron_folicacid.pdf, accessed 30 September 2009).

[6] Beaton GH, McCabe GP. Efficacy intermittent iron supplementation in the control of iron deficiency anemia in developing countries: An analysis of experience. Ottawa, The Micronutrient Initiative, 1999.

[7] Margetts BM, Tallant A, Armstrong E. Weekly iron folic acid supplementation for women of reproductive age: a review of published studies. Desk review prepared for WPRO, 2007.

- If prevalence of anaemia in women of reproductive age is not available, then where anaemia prevalence is >40% in pregnant women or children under five years of age can be used as an alternative
- In absence of any anaemia prevalence data, dietary patterns and socioeconomic status may be used to determine where WIFS could be used (e.g. women from low income groups who may not have access to processed iron-fortified food products)

TABLE 1.0 – WHO recommendations on dosage of iron and folic acid (FA) supplementation

Population Group	Dose of Iron* and FA	Weekly vs. Daily
All women of reproductive age	60 mg iron; 2800 µg FA	Weekly
Women during pregnancy and 3 months postpartum	60 mg iron; 400 µg FA	Daily
Women where mandatory FA fortification has been introduced and shown to be effective already	60 mg iron (ONLY iron supplementation necessary)	Weekly
Antifolate antimalarial treatment users (usually used in malaria endemic areas)	60 mg iron (ONLY iron supplementation necessary)	Weekly

***Note:** Iron dose may cause short-term gastrointestinal discomfort and black stool, but no risk of long-term toxicity

- Strategies to combat iron deficiency anaemia, and improve iron and folate status in women of reproductive age, should be **'integrated'** (e.g. deworming, malaria prevention and treatment, vitamin A deficiency should be considered)
- WIFS programs must be integrated with other efforts to control iron deficiency anaemia and be planned as long-term self-**sustained inte**rventions that women of reproductive age will utilise during their childbearing years
- Successful implementation of WIFS program requires motivation and creation of demand by women of reproductive age

- **Recommended mechanisms to start and sustain programme:**
  1. Adequate funding;
  2. Community level support and public-private partnerships including NGOs;
  3. Uninterrupted supply of good quality iron and folic acid supplements;
  4. Development of effective communication strategies with the media and other information channels;
  5. Establishment of methods for promoting compliance by women of reproductive age, especially when taking of supplements is not supervised;
  6. Integration of WIFS with effective and existing delivery systems in health, education and private sectors (e.g. in factories, markets, and local shops) as well as through community organizations

- **Monitoring and evaluation recommendations:**
  1. Monitoring and evaluation systems should be implemented to check whether desired outcomes are being achieved
  2. Baseline data are needed **BEFORE** launching WIFS interventions
  3. Programmes must be monitored closely with regard to both processes and outcomes during the first year, and then annually for the next five years