



IMPROVING THE CHANCES THAT NUTRIENT SUPPLEMENTS WILL MAKE A DIFFERENCE

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**Global Meeting, Implementing Effective Programs
to Prevent Pre-Eclampsia/Eclampsia and Anemia to
Improve Maternal and Newborn Outcomes**

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Presentation Outline

1. What does improving demand mean, especially for **preventive programming**?
2. What have we learned about improving **demand** for, and **adherence** to, iron-folic acid (IFA) supplementation during pregnancy?
3. How does this experience apply to Ca^{++} supplementation?

Quiz

- 1. True or False?** Side effects are the most important reason that pregnant women do not take the recommended 90 days of Iron Folic Acid (IFA) supplements.
- 2. True or False?** To create demand and ensure continued correct use of IFA supplements, the most important thing for women to understand is what anemia is and how it effects them.
- 3. True or False?** Studies have found that the level of adherence to taking IFA supplements among women in the developing world is around 65%.

Answers

- 1. False.** Research indicates that <10% of women who stop taking supplements do so because of side effects. The most important reasons why women do not take 90 days of supplements are¹:
 - 1) service factors
 - *For example* – lack of supplies, poor provider-patient relationship
 - 2) patient factors
 - *For example* -- frustration with the number of tablets, anemic women feel better
- 2. False.** While a woman’s understanding about anemia may be important, it is not enough nor the most effective way to improve adherence. Far more influential are practical matters—ie, the convenience of resupply, unexpected side effects, and how to remember to take the tablets.
- 3. True².** Working on adherence is critical to the success of a supplementation program.

¹ Galloway R and J McGuire. “Determinants of Compliance with Iron Supplementation : Supplies, Side Effects or Psychology?” *Soc. Sci. Med.* Vol. 39, No. 3, pp. 381-390, 1994.

² Ibid; Lacerte P, et al. “Determinants of Adherence to Iron/Folate Supplementation During Pregnancy in Two Provinces in Cambodia.” *Asia Pac. J Public Health.* Vol. 23, No. 3, pp. 315-323, 2011.

1. What does “improving demand” mean?

- Demand is the interplay between a product (the supplement), the service (how it is provided), and its use.
- For supplementation programs that means more than just seeking the tablet. The intended users must:
 - ✓ be willing and able to take the supplements;
 - ✓ continue to take them for the recommended period of time (**adherence**);
 - ✓ take them correctly—daily.
- **We cannot divorce the supply from demand, nor assume that if we recommend supplements, women will take them as prescribed for the full period.**

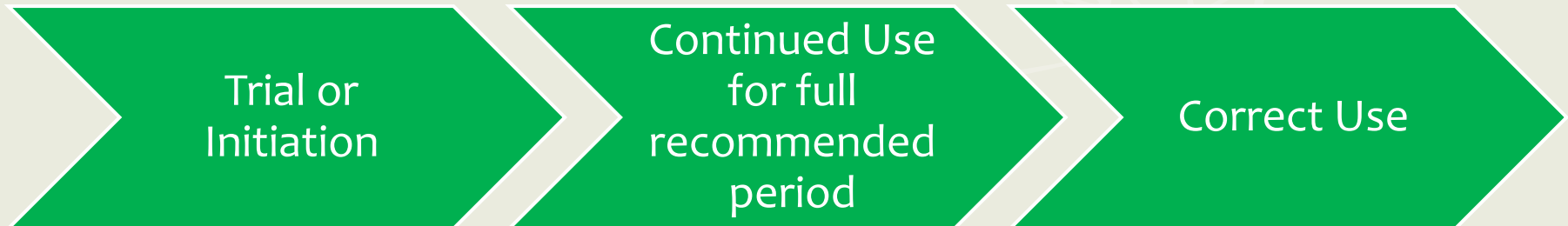
Setting the stage: improving demand & adherence

1. Adhering to medical recommendations -- taking supplements-- is a **behavior**.
 - Therefore, behavioral science is required.
2. Improving a behavior requires more than giving information.
 - Therefore, understanding the user's needs and desires is important.
3. Encouraging the behavior of taking supplements requires focusing beyond the individual.
 - Therefore, understanding the product, service delivery and socio-cultural context in which supplement-taking fits is critical.



2. The behavior of taking supplements

- **Not a single behavior:** it is not a matter of just taking or not taking a tablet.
 - There are 3 sub-behaviors to consider:



- It is important to promote all 3 sub-behaviors so that the full benefits can be achieved.

Insights

- **Formative research** with the user provides insights into critical considerations and conditions for each sub-behavior
- For each sub-behavior or phase required for adequate supplementation formative research offers insights to improve programming related to:
 - the product / tablet;
 - the service;
 - the personal or cultural factors.

Experience with IFA Supplements

Initiation



Tablet dosage & form

- Formulation --taste, size, color, coating
- Packaging to prevent deterioration



Service delivery

- Provider-patient relationship: confident to take
- Counseled on what to expect (possible side effects , when they should subside , how to manage)
- Follow-up : 2-4 days & 2 weeks (anemic women may feel better)



Personal & socio-cultural factors

- Views of pregnancy, and taking modern medicine during pregnancy
- Is this for me? (anemia test, pallor, tiredness)/ reason to try
- Family support
- Reminder to take

Experience with IFA Supplements

Continued Use for
Recommended Period



Tablet dosage & form

- # tablets, # times per day; ease of taking
- Storage
- Reminders



Service delivery

- Ease and reliability of re-supply
- Follow-up after initiation to ask about specific behaviors & resolve issues



Personal & socio-cultural factors

- Experience during first month / concerns if side effects are not resolved
- Experience with pregnancy
- Perceived benefits – reason to continue
- Fear too much blood or high blood pressure or big baby if continue
- Reaction of others in HH & peers

Experience with IFA Supplements

Correct Use



Tablet dosage & form

- Storage
- Absorption enhancers / inhibitors



Service delivery

- Counseling on managing side effects, missed doses
- Follow-up

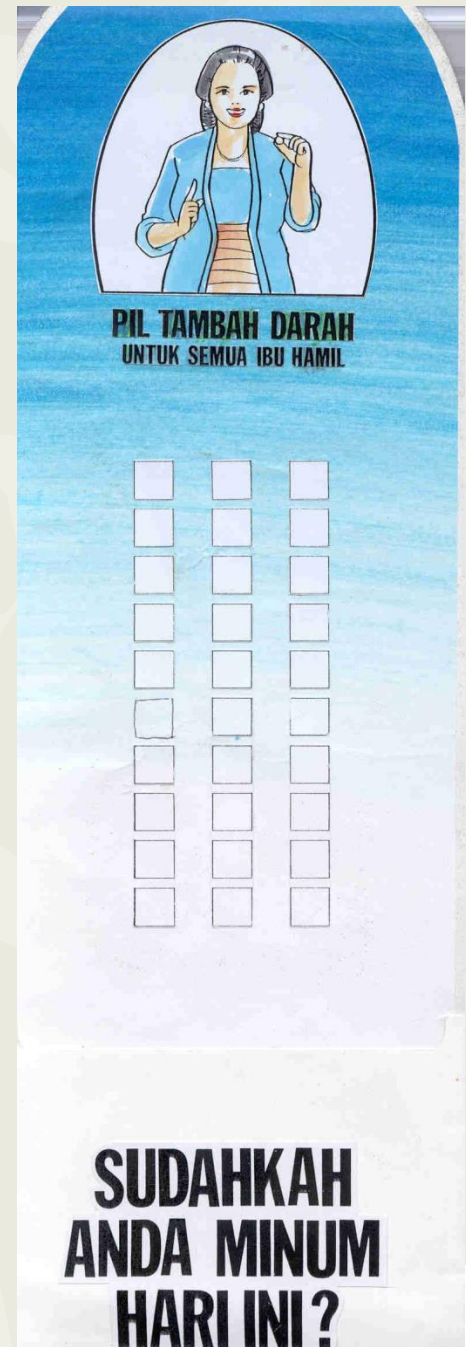


Personal & socio-cultural factors

- Family support
- Self motivation
- Reminder

Indonesia experience

- Tablet formulation & dose
 - Women preferred red color (for blood), coated for taste
 - Lessons related to the importance of packaging and storage
 - ✓ Blister packs
 - ✓ Recommended to be kept where pregnant women could see them, but out of the way of children
 - Difficulties remembering to take every day
 - ✓ Visible reminders



Reminder materials

Llévate este calendario a tu próximo control



HORA DE TOMAR TU TABLETA DE HIERRO

...es mejor si la tomás con limonada o naranjada.



NO SE TE OLVIDE TOMAR TU TABLETA CADA DIA Y MARCAR UNA SONRISA



TE QUEDAN POCAS TABLETAS

Porque deseo un parto seguro y un embarazo saludable yo

ME COMPROMETO A



Tomar la tableta de Hierro con naranjada o limonada.

ME COMPROMETO A



Marcar el calendario cada vez que tome la tableta.

ME COMPROMETO A



Seguir estas consejos mientras doy los lactantes: cambiar la hora de lo toma de la tableta, tomarla junto con las comidas, tomar mucho líquido.

ME COMPROMETO A



No tomar café junto con la tableta de Hierro.

ANTES DE IR A TU CONTROL MARCA ASI



Si Cumplí No Cumplí Medio Cumplí

LLEVA ESTA TARJETA A TU PROXIMO CONTROL



CALENDARIO 2002-2005



Chipatale mwamsanga zindikire zoopazi

CALENDAR 2002

December						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

PHASICS II

Indonesia experience (cont.)

- Service delivery
 - Improved counseling quality and provider-patient relationship
 - ✓ Women were more likely to try tablets when:
 - given as vitamins than as medicine,
 - when they believed that the provider cared about them.
 - Identified 3 ‘danger times’ for stopping
 - Added community re-supply and follow-up
 - ✓ Preference for midwife over TBA.
 - ✓ In Pakistan, women preferred resupply option at the bazaar where husbands could buy tablets, without waiting.

“It is better to go to the health clinic [than the TBA] where I can get tablets and check the pregnancy all at once.”

- 22 year old pregnant woman

Indonesia experience (cont.)

- Personal & socio-cultural factors
 - Fear of big baby
 - ✓ Addressed during initial counseling for trial
 - Concern about ‘too much blood’ after taking for some time
 - ✓ Addressed to support continued use
 - So, increased women’s confidence about the safety and benefits
 - ✓ Created a trusted authority, “Ibu Sehat” used in mass media and print materials
 - ✓ Shared testimonies from satisfied women who have taken the supplement successfully



3. Relevance to Ca⁺⁺ Supplementation

- Tailor product to consumer preference
 - tablet over powder; chewable, flavored tablet
- Number of tablets
 - adherence decreases with the number of tablets³
- Resupply options
 - needs to be as close and convenient to the woman as possible (community distribution?)
- Counseling
 - provider-patient relationship & counseling produces confidence to try and continue to take correctly

³ Sbarbaro J and Charoenlarp P et al. cited in Galloway R and J McGuire. "Determinants of Compliance with Iron Supplementation : Supplies, Side Effects or Psychology?" *Soc. Sci. Med.* Vol. 39, No. 3, pp. 381-390, 1994.

Relevance to Ca⁺⁺ Supplementation (cont.)

- Benefits of taking supplements correctly for the full recommended period
 - Preventive⁴ -- Signs and symptoms less visible than for anemia
- Address concerns, especially if combined with IFA
 - taking medicine;
 - potential for confusion: low blood (anemia) & high blood pressure;
 - potential for fears about making the baby stronger (big baby).
- Reminders (visual, audible – mobile phones)

⁴ Pfister A et al. “An Assessment of Postmenopausal Women’s Adherence to Calcium with Vitamin D Supplements.” *The Journal of Applied Research*, Vol. 8, No. 2, pp. 143-150, 2008.

Recommendations

- Every program to introduce calcium supplements should undertake thorough formative research with adherence follow-up.
 - Learn from the users **pre-program design** to understand what will help pregnant women be willing to take the supplements, and what they need to continue to take them for the full period, correctly.
 - Build body of understanding to apply more universally
- ✓ Tablet formulation and packaging
- ✓ Service delivery – who is trusted & content of counseling (overcoming resistances)
- ✓ Community-based distribution for resupply and follow-up
- ✓ Reminders and engaging support networks of family and peers.



Thank you