

# Forging Effective Strategies to Combat Iron Deficiency

## Communication Strategies to Optimize Commitments and Investments in Iron Programming<sup>1,2</sup>

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**ABSTRACT** There is consensus that a communications component is crucial to the success of iron supplementation and fortification programs. However, in many instances, we have not applied what we know about successful advocacy and program communications to iron programs. Communication must play a larger and more central role in iron programs to overcome several common shortcomings and allow the use of new commitments and investments in iron programming to optimum advantage. One shortcoming is that iron program communication has been driven primarily by the supply side of the supply-demand continuum. That is, technical information has been given without thought for what people want to know or do. To overcome this, the communication component, which should be responsive to the consumer perspective, must be considered at program inception, not enlisted late in the program cycle as a remedy when interventions fail to reach their targets. Another shortcoming is the lack of program focus on behavior. Because the "technology" of iron, a supplement, or fortified or specific local food must be combined with appropriate consumer behavior, it is not enough to promote the technology. The appropriate use of technology must be ensured, and this requires precise and strategically crafted communications. A small number of projects from countries as diverse as Indonesia, Egypt, Nicaragua and Peru offer examples of successful communications efforts and strategies for adaptation by other countries. *J. Nutr.* 132: 834S–838S, 2002.

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Recently, The Manoff Group undertook, on behalf of Micronutrient Initiative, a qualitative research study of the views held by policy makers, program managers and technical experts about iron deficiency and anemia, iron programs and communication interventions (1). Individuals, particularly those who work in iron programs, expressed pessimism about whether any action could turn around the high rates of anemia and iron deficiency among the poor. People were quick to cite multiple program failures and a lack of consensus on what to do as reasons not to move forward. They made statements such as: "Iron is messy." "Iron has been neglected due to a lack of good, simple programs to implement." "Iron is the most studied micronutrient but we have the least consensus on it."

However, the pessimism was countered, often by the same person, with statements of renewed commitment that the time is right to tackle this major public health problem, and that the lessons are accumulating to make success just a matter of time. This new hope is shown in statements such as: "Labor and productivity are on the poverty reduction agendas and tackling anemia contributes." "Iron's link to cognitive development is of major concern." "We have enough evidence that iron supplementation of school-age children works."

With the renewed energy and commitment for iron evident at this conference, it is incumbent upon us to be cognizant of the negative notions but to build upon the assets iron programs offer. There are positive experiences to showcase, and disappointments to learn from, but let us agree now to make iron program success stories among the most impressive in public health.

Communication, the strategic and creative use of communication, is central to making the technological advances in iron successful program stories. Communication affects the entire program. It is the heart that keeps the blood flowing. One of the roles for communication is advocacy, telling of our successes, inciting further global interest in action. Another role for communication in program work is to bring to life consumer demand by helping people take action, making iron programs work more effectively (e.g., improving women's adherence to supplementation protocols) or increasing the purchase of fortified foods or the use of available iron-rich foods.

Consumer demand is a key lesson that many programs have

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<sup>4</sup> Abbreviations used: SHIP, student health insurance program; TIPs, trials of improved practices; USAID, United States Agency for International Development.

trouble applying (2). Major program waste comes from assuming that making supply available will lead to appropriate use. For example, we build health centers without thinking of who will use them, when and why. Subsequently, many health centers remain empty. The need to find a balance between supply and demand is true in every aspect of iron programming. Supplying facts and information about the worldwide anemia problem to policymakers does not necessarily lead to supportive policies, actions and resources. We must instead create demand for policies, actions and more resources by examining how policymakers articulate demand. Supplying iron tablets or a fortified food does not ensure their uptake or their proper use. We must create the demand, supply the tablet or food in the appropriate form based on the demand, and educate about proper use so that demand is satisfied.

When communication is used to its fullest, allowing demand to drive supply, there are five key lessons that must be applied to achieve success (2,3). The first, not surprising from a communicator, is to implement communication/communicators at the beginning of a program. We should not think of communication in terms of products (fliers, posters, videos) but rather as a process to create and satisfy demand. A professional or team familiar with communication planning, strategy and management is required, not just a designer to draw the poster. Leaving communication until the end is equivalent to a food fortification program that decides on a food product and fortification level and then asks the food technologist to join the team just to add the fortificant.

The second lesson is to understand thoroughly (do the research) the intended beneficiaries or participants of the program. Communicators should be able to provide insights from intended participants related to their actual perceptions and practices, and their resistances to and motivations for new ideas, concepts and practices. When done well, the participant's circumstances and needs are analyzed in the context of the epidemiologic profile of the situation. This analysis allows the pros and cons of various strategies to be examined to ensure that both the nutritional and the lifestyle needs of the consumers are met, efficaciously and efficiently. This is important for iron programming because the causes of iron deficiency and the solutions are multiple. If the circumstances are not studied and a wrong solution is selected, the likely result is failure.

The third lesson is to use communication strategically. Again, communication is not about numbers of materials or broadcasts. It is about reaching people and moving them to action. Strategy, of course, will depend upon the specific culture, on the goals of the program and on the solutions available. For communication to succeed, the strategy must combine the art and the science of communication (4). The art is the creative element, i.e., the expression of an idea, a symbol or an action that captures attention because it is meaningful and memorable. The science is the definition of technical content, the efficient and strategic use of media, the development of an educational video or a print material to prompt action or change.

The fourth and fifth lessons also relate to strategy, but to the communication per se, rather than the process. The fourth lesson is to ensure that the communication is precise. A textbook of information belies the lack of strategy. When you see or hear a communication, you should know who is being addressed, precisely what is being communicated and what, precisely, a person should do with the information. Also, there should be evidence that the communication will be delivered at a time and a place relevant to the information and action

(4). Finally, the fifth lesson is the communication must resolve resistances and build on assets (people's existing knowledge and practices). When you look at a communication, don't just check to see if all of the scientific information is correct, but ask yourself the following questions. Is the problem being addressed clear? What is the resistance or barrier being removed so that the problem can be solved? Is the communication convincingly addressing the barrier to action? Resistance resolution should be evaluated, not just the facts about iron or anemia (4).

For communication to do its job for iron programs, these five lessons must be applied; otherwise the call for better education and more consumer participation will not be realized. A review of the application of these lessons to iron programs points to areas of weakness and strength, to communication strategy templates ready for broader application. Here is a quick review of where we are.

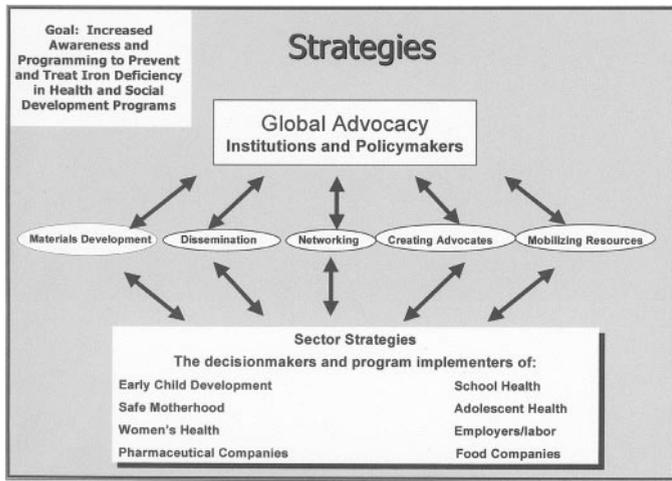
**Is communication a consideration from the beginning?** Occasionally, yes, but primarily, no. Concern seems to be with the search for the magic technology, i.e., the correct iron compound or product. Concern is also focused more on defining the extent of the iron problem in clinical terms than it is with creating demand or ensuring appropriate use of known technologies. This gap is large and holds back the expansion of effective products to people in need, or limits the effect of programs because demand and appropriate use have not been addressed. Alliances must occur at the beginning of program design with local communication experts, whether in public or private agencies. Professionals are available in most countries.

**Have we done the audience research?** Generally, yes. There is excellent qualitative and quantitative research related to perceptions and practices, particularly in the area of iron supplementation for women. There is also good research related to improving the iron status of school-age children, marketing fortified foods and provoking action among policymakers. Although much of this research is country specific, in some cases, there have been enough studies that findings can be generalized and methods certainly can be shared among programs.

One qualitative research methodology, trials of improved practices (TIPs),<sup>3</sup> was first developed to look at feeding young children (5). This method has proved helpful in developing program strategies for iron supplementation and improving dietary practices to enhance intake of and absorption from iron-rich foods. Research of this type should be disseminated by the iron community to strengthen consumer participation in iron program design.

In brief, this research methodology calls on a small number of intended beneficiaries to try new behaviors, such as taking a supplement every day, postponing or decreasing tea drinking, adding iron-rich or vitamin C-rich foods to the diet. Rather than assume people will automatically undertake these practices because they are beneficial, this methodology asks people to *try* the practice and report back on their progress. This is a lesson from food companies: never launch a product without trying it first with those who are likely to use it; the risk of failure is too costly. The public health community is just beginning to adopt this point of view. Through trials that usually last only a week or two, program personnel have been able to identify the real barriers, both physical and perceptual, to adopting new practices.

To illustrate the precision of behavioral and attitudinal insights learned during TIPs, the following are examples of results from TIPs research with women related to iron supplements and diet improvement (6–9).



**FIGURE 1** Framework for advocacy work in health and social development programs.

- Almost all women but those experiencing extreme nausea are willing to take iron pills.
- Women want to know what to do about side effects
- Women, especially pregnant women, need to be reassured that iron pills are not medicine.
- Remembering to take the pill is a problem
- Tea drinking behavior *can* be modified.
- Heme iron and vitamin C food intake are entirely dependent on availability, but if available, they will be consumed.

With this knowledge in hand before, not after, program design, appropriate steps can be taken to adjust to consumer needs. Although country-specific work may be required, some findings can be generalized and used by others. Also, there is clear guidance that should be made more widely available to programs to help streamline the process of participant research.

**Are we using communication strategically to promote the global iron agenda?** The answer is no, but there are plans to remedy the situation. Past communications for policymakers and program designers have been too general. The facts and figures presented to date have not led to much action. Goals for this meeting should be to show that there is a united iron community, to form key alliances with groups in other sectors and to provide information, particularly success stories, that will keep demand high. One proposal for future advocacy action calls for the development of activities on two fronts, i.e., globally, and within specific sectors, with information tailored for each (Fig. 1) (10). The sectors range from early child development to employers. Concerted efforts on networking, creating advocates, mobilizing resources, and also on materials development and dissemination are proposed. Putting this plan into action would optimize many dormant commitments.

**Are we using communications strategically within programs?** Looking at the sum of all programs, the answer would undoubtedly be no. But, there are programs in which communications have been used strategically, the communication was precise, resistances were resolved and assets used convincingly. The examples of successful communication activities come primarily from maternal supplementation programs, but there are other examples from programs improving iron intake among adolescents. These programs dispel the notion that we have no successes to share in iron program communications.

Maternal supplementation programs, which have long suf-

fered from the absence of a demand creation strategy, have demonstrated success when communication programming has coincided with securing an adequate supply of tablets. The early USAID (United States Agency for International Development)-supported MotherCare work in Indramayu showed significantly more women taking iron supplements, significantly more pills being taken each month and about one additional month of iron pill-taking when well-tailored communications about how to take the supplement were given to women than when it was not (11). These results have stood the test of time. In later USAID-supported MotherCare work in other regions in Indonesia, mentioned by Dr. Achadi in her presentation, and in other countries, as reported in *Issues in Programming in Maternal Anemia* (7), it is clear that high rates of compliance are achieved with iron supplements when communication focuses on the following: 1) counteracting side effects; 2) the highly desirable benefits of iron for women and their babies; 3) the positive experiences women have with relief from chronic headaches and exhaustion; and 4) where to obtain the pill.

Key program factors in ensuring the effect of communications on compliance included the following:

1. Individual counseling.

With counseling, almost all women, ( $\geq 80\%$ ) are willing to take iron tablets.

2. Training in interpersonal communications.

In exit interviews, 98% of women respondents served by personnel trained in counseling skills said that they would follow the advice offered vs. only 32% of women who were counseled by people who had not been trained (7).

3. Addressing the common danger points for dropping out of supplementation programs.

TIPs research and program experience indicates that there are key times for action to address side effects and to urge continuation of pill taking. These are the first 4 d when side effects are worst, after 1 wk when anemic women start to feel better, and after 1 mo, when supplies run out (2).

4. Finding a way to remind women to take pills every day (Fig. 2) (12).

The take-home message from the success of the program communication highlighted here is that it was not information about anemia, iron or blood that was important, but rather creation of demand by specifically addressing concerns and problems of women that were articulated during TIPs-style research.



**FIGURE 2** Example of reminder material used in Nicaragua for daily iron supplements for women.

For supplementation programs for women, a communication strategy framework exists that is not complicated or costly to implement, that has been tested and that is available to optimize investments in pills and their distribution. **Figure 3** summarizes the elements.

Another area with recent success in iron communications is adolescent programs, both school and non-school based programs. School programs may, to some managers, seem to require no communication effort. The participants are captive, i.e., there is no choice but to take the supplement. However, research and experience have shown that there are communication needs in this group. Specifically, student concerns about taking medicine in class must be addressed, rumors that iron pills are family planning medicine must be dispelled, and students must be educated about health-promoting dietary practices. A large scale school based iron supplementation program in Upper Egypt managed by the Student Health Insurance Program (SHIP) had virtually 100% compliance (13). Program managers found they could reach the last small percentage of children who refused to take iron supplements when an informational campaign was conducted in the school and short spots were shown on local television channels. Both activities informed the public of the purpose of the supplementation and built on the high premium all families place on school achievement.

Also, critical to supplementation efforts with adolescents seems to be the addition of education on diet improvement. This education helps to demedicalize the supplement and places the control of iron deficiency in the hands of the adolescents. Dietary change was promoted in the SHIP school based program in Upper Egypt (13), and in a more informal setting in USAID-supported MotherCare projects in Peru and in India (8,9). In Egypt, the program focuses on the following four dietary practices: eating breakfast, including iron-rich foods in the daily diet, eating fruits and vegetables high in vitamin C and delaying tea drinking until after the meal (**Fig. 4**).

Although there is no information on iron status improvement from dietary change alone in Egypt, supplementation plus diet change have produced a 20% drop in anemia rates among school-attending adolescents in the governorate of Aswan, where rates were measured over 4 mo at the end of the 2000 school year (13).

In Peru, two dietary changes were addressed with adolescents, i.e., eating more low cost foods rich in heme iron and increasing consumption of vitamin C-rich foods when eating nonheme iron foods such as beans (9). The evaluation measured an increase in daily iron intake from 6.6 to 9.4 mg. Although 9.4 mg is still below the Recommended Daily Allowance for adolescent girls, the increase is signif-



**FIGURE 4** The four key practices illustrated in a reminder material for students (on the left) and for mothers (on the right).

icant and important because it was achieved from dietary sources alone.

As with communication programs to support iron supplementation for women, communication strategies and programs for adolescent school children do not have to be complex (**Fig. 5**). The strategy must include the following: 1) information for parents and students about the supplement (why, when, and where), offered through community channels such as the school, meetings and possibly through local mass media; 2) answers to fears, if they exist, about the supplement; and 3) a discussion of the supplementation in the context of overall dietary improvement. Adolescents should be given tools as part of the communication to improve dietary practices and to become a medium for dietary change in the home.

In conclusion, a successful supplementation program incorporates implementation and strategic use of communication plans from program inception. Effective use of communication strategies will bring vitality to supplementation programs resulting in advocacy and behavior changes. We have strategies ready for country adaptation as illustrated by the examples of supplementation for women and adolescents. The proper use of communication will help realize commitments and investments to move iron programs ahead. Continue to do research to understand demand and use communication to cater to that demand. Give precise and convincing messages to policy makers as well as to program participants (women and adolescents). Use the power of communication to revitalize focus on reducing

Audience:	Family/Community	Pregnant Women	Women with Side Effects (low compliance)
Media/Purpose:	Appropriate local media Need for and benefits of iron supplementation	Counseling aid • You can do it • Supply/ re-supply • Coping with side effects	Counseling aid • Hints about coping Reminder materials
		Reminder materials • When to take pills • Continue taking pills	

**FIGURE 3** Communications strategy to improve participation and adherence with iron supplementation.

Audience:	Family/Community	Students/Adolescents
Supplements	Appropriate local media • Need for and benefits of iron supplements • Address rumors and fear • How program works	In-school materials • Need for and benefits of supplements • How supplement taking works
Diet	Reminder materials • key practices for mother • student initiated home activities	Non-formal activities • Non-formal activities/self-assessments • Why improve dietary practices • Specific things to do- control intake

**FIGURE 5** Communications strategy to improve iron intake of adolescents.

iron deficiency, and make this effort one of the success stories in public health.

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