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## **Key Policy Issues in Iron Deficiency Control and Prevention**

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For the meaningful reduction of iron deficiency, we need an effective program. What are the essential elements of a successful public health program? We need to consider whether the different aspects of current efforts to control of iron deficiency in fact meet the minimum requirements for success. If not, how do we assure that they do.

The first steps of a successful program to reduce iron deficiency are recognition of the problem and obtaining broad agreement that something must be done. Anemia is well known to be one of the world's most common micronutrient deficiencies, affecting more than half the young children and women in some areas. In the case of iron deficiency, using anemia as a key indicator, clearly the magnitude of the problem is impressive. The ability to quantify the magnitude of the problem is also well established. Anemia prevalence surveys can be done easily, and there are a number of biochemical indicators available to meet the special assessment needs. In short, we have no difficulty in defining the scope of the problem – it is common. The nutrition research and public health community has done a good job in this regard. The same tools can be used to monitor the effectiveness of any program effort.

Recognition of a public health problem goes beyond quantification in terms of prevalence and also defines the burden in terms of cost to the society. The burden of iron deficiency beyond anemia prevalence is also well known within the nutrition community – negative developmental consequences for young children and reduced work productivity for adults. There have been several studies focusing on these issues in the past decade, but this key information on societal burden has not been communicated adequately to those outside the nutrition research community. In short, the researchers have done a good job in defining the societal burden but have not been effective in communicating the costs of these burdens. Effective communication of the burden of iron deficiency is one of the two essential components of any advocacy effort for a meaningful program.

The second major element necessary for an effective program is the formulation of control measures that are likely to be successful. Often, the first step is the testing of specific interventions in a controlled setting to determine efficacy. The nutrition research community has done an outstanding job in this regard. However, while necessary, efficacy testing is not sufficient to build a successful program. For example, in well-conducted clinical trials iron supplementation significantly reduces maternal anemia. However, program effectiveness has been limited.

Following on formulation and testing of potentially effective interventions, another element essential to an effective program is the transformation of an intervention with demonstrated efficacy into a feasible programmatic operation. Several issues need to be addressed to assure

program feasibility and, hence, increase the likelihood of effectiveness. Operational feasibility issues touch on cost, program delivery mechanisms and acceptability and also are an essential element in gaining the policy support needed for a large-scale program. For the most part, this step--consisting of work on defining the operational feasibility--presents a most serious challenge. Adequate leadership, as well as technical and financial resources are often lacking for this essential step. In addition, there is often a lack of clear responsibility among the research and programmatic communities, which results in it falling between the cracks. If we want to make meaningful progress in efforts to reduce iron deficiency, we must support the development of the capacity of this important element--filling the crack, so to speak.

Proposing a feasible action is the second key component of the advocacy effort for program development. Successful advocacy is part of the feasibility equation in building the policy and resource base needed for an effective program to reduce iron deficiency. While there were recent successes in placing a global goal to reduce anemia in the documents that will come out of this year's U.N. General Assembly Special Session on Children, we need to borrow the lessons learned from other major micronutrient programs. A communication strategy for Vitamin A deficiency shifted its definition as an eye problem to an issue of child survival. A communication plan shifted iodine deficiency from being perceived as a problem of goiters to that of child development and intelligence. For both vitamin A and iodine deficiency elimination programs, clearly defined interventions was also an important component of the advocacy effort and overall communication strategy.

In terms of operational feasibility, a major lesson learned from salt iodization and successful wheat flour fortification in some countries is that once the technical feasibility is defined, programs or actions become effective realities only when the key players are meaningfully included as partners of the enterprise. In the case of iodization, salt producers became key players, and for iron, key players include flour millers. In essence, most micronutrient improvement efforts require a partnership-based strategy.

In summary, an effective iron deficiency prevention and control program needs to build on the sound research and development of products that the nutrition community has already produced. From this base, we need to develop our ability to transform these products into feasible actions that are "owned" and carried out by key partners in the programs. Greater investment in national capacity building for interface between research and program design is indicated. We need to have adequate communication components to gain policy support by demonstrating the unacceptable burden of iron deficiency and the cost-effectiveness of feasible intervention(s). The process of carrying out these actions is open to ongoing improvement provided they are monitored and this allows lessons learned to be shared across programs to reduce iron deficiency.