

Bottleneck Assessment and Bottleneck Inventory A Guidance Note for Country Teams

Background

This Implementation Science Initiative (ISI) seeks to identify and address implementation bottlenecks throughout the duration of the initiative in a program that delivers iron and folic acid supplementation (IFAS) to pregnant women primarily through antenatal care (ANC) services. A comprehensive bottleneck assessment needs to be done early on, to identify the main bottlenecks affecting the delivery, uptake and utilization of IFAS. This will allow creating a bottleneck inventory that will be updated over time. This component involves a holistic and continuous problem-solving approach that ensures that key stakeholders are engaged in assessing and addressing critical bottlenecks.

There are various ways by which the bottleneck assessment can be done. We do not want to be prescriptive regarding the choice of the approach taken or the tools used for this assessment. The main requirement is that the tool should generate a systems view because bottlenecks are challenges experienced at any level in the system. It is not possible to map out all the challenges, but we would like you to use tools and a systematic approach.

Bottleneck assessment

An exercise is proposed to illustrate one way by which this assessment could be done, with the adaptation of modules from the Program Assessment Guide (PAG).¹ To produce the desired impacts on a national scale, health and nutrition programs must deliver commodities and/or services to the relevant target populations on a large scale basis. For this to happen successfully each country must strengthen and organize **systems, people and processes** to ensure the nutrients are produced, procured, delivered, and appropriately used to/by the intended individuals, households, and communities. In each case, attention must be directed to four key dimensions:

- a) supply system,
- b) household and community demand, utilization, and compliance,
- c) information and decision support at each level of the system, and
- d) social and political commitment.

Each of these dimensions must be addressed in order to ensure a system-wide impact on achieving effective coverage at scale and intervention sustainability over time. The particular contextual factors that may enable or inhibit these four dimensions can and do vary widely within and across countries. Therefore, these factors must be systematically assessed throughout the project cycle.²

Considering that the focal program selected involves the support of existing services delivered through the health system, the implementer is expected to work closely with the relevant government actors to ensure that the bottleneck assessment considers the system-level factors that are creating those bottlenecks. This will help ensure that strategies are developed to address the bottlenecks.

¹ This guidance has been developed based on the following document: Pelletier D, Corsi A, Hoey L, Houston R, & Faillace, S. (2010). Program Assessment Guide. In A. Z. Project (Ed.), *AED*. Washington, DC.

² Excerpt from the PAG, p. 5.

Creation of a bottleneck inventory

The initial bottleneck assessment will allow the development of a bottleneck inventory. It is anticipated that this inventory will become more extensive, detailed and nuanced as more knowledge is gained about IFAS intervention, and that “bottlenecks within bottlenecks” will be revealed. This includes bottlenecks in that uptake and utilization of information by decision makers. The inventory will be converted into a Gantt chart to note progress and will be updated regularly. The SISN technical lead will provide support throughout these processes. It will be a central focus of the regular Skype calls between SISN and the project manager and help identify the types of support needed.

The undertaking of the comprehensive assessment should involve regular interaction with SISN so that existing knowledge, tools and frameworks can be located to address bottlenecks, and eventually identify potential research questions to develop the implementation research (IR). The implementers will need to provide reports, and the initial one should include: What was the process by which government actors and others were involved in the comprehensive bottleneck assessment? Which tool or process was used? Description of the various bottlenecks identified? Identification of the bottlenecks prioritized to be addressed?

Tool 1: Mapping the delivery system

- Your team needs to map out the systems (the primary people, organizations and processes) involved in delivering IFAS to pregnant women.
- Specify these at national, regional, district, facility, community, and household levels.
- Identify at least one person at each level with a description of the activities this person needs to carry out:
 1. **Supplies and logistics:** How will the supplements get from national level to all pregnant women in the communities?
 2. **Behavior Change Communication (BCC):** How will BCC get to all pregnant women?

In other words, who is involved and what needs to happen at every level for IFAS to be delivered. You should map out the primary vertical links in the chain at the different levels of the system, to implement IFAS in a quality manner. We only need the primary links in outline form and this will be put on a flip chart paper.

Addressing the bottlenecks

Once the bottlenecks are identified, the core team will need to prioritize the ones that are considered most critical. The project managers will work with the SISN senior nutrition advisor to find existing knowledge that could help find solutions and innovations used in other contexts and that could be applicable to the IFAS intervention. When existing knowledge will not be found, the core team, supported by researchers, will help identify relevant questions that will form the basis for implementation research (IR) inquiries and implementation strategies to address the knowledge gaps.

Tool 2: Five Needs Tool

Each person working for the delivery of IFAS to pregnant women has certain **needs** that must be met in order for them to fulfill their role or responsibility. These can be met through inputs, activities, and/or system changes.

- In light of the mapping exercise done, please fill in the template in table 1 by considering all five needs of at least one individual at each level. An illustration of those needs is found below. It is important to consider the five needs of all actors in the system.
 1. **Awareness:** Caregivers that influence pregnant women need to have awareness of the purpose and benefits of the IFAS intervention.
 2. **Knowledge, Information & Skills:** Caregivers must have the specific knowledge, information and skills required for accessing and using the intervention appropriately.
 3. **Commitment and Motivation:** Caregivers need periodic support from health workers and mother-in-laws, reinforcement from mass media messages and local opinion leaders, and regular support from family members and others, to sustain motivation.
 4. **Resources:** Caregivers need a consistent supply of certain commodities (e.g., micronutrient powders or fortified foods); they may need time, transportation or bus fares to visit clinics; they may need to communicate the proper use of the commodity to relatives and other caregivers who feed the young children when the mother is away, etc.
 5. **Support from others:** Caregivers need support from the volunteer health workers and from the community and other social networks to reinforce the new behavior of use of the commodity. For instance, they may need husbands, mother-in-laws and other relatives to support their decision to use the commodity or to initiate and sustain the behavior change.

A major flaw in much planning and intervention design is to focus on knowledge needs, but knowledge is a necessary but not sufficient condition for fulfilling one's roles and responsibilities. The five needs tool helps identify the other conditions.

Examples

To illustrate the information generated by the Five Needs Tool, in a program designed to deliver and promote the consumption of micronutrient powders by young children, the **mother** would need awareness of the problem, some behavioral objectives, the knowledge, skills, cues, reinforcement, and confidence for properly using the powder (along with improved feeding practices more generally), the motivation and incentives to prioritize these behaviors, the time and other needed resources, and the support from significant others such as her husband and mother-in-law.

Meanwhile, the **clinic worker** distributing the powders and offering guidance to mothers would also need the awareness and some performance goals in support of this intervention, the knowledge and skills for delivering it, the motivation and incentives to give it priority, the resources (powders, time, etc.), and support from significant others (the clinic supervisor, the logistics and supplies team, the community outreach workers, etc.).³ And so on, at every level in the delivery system.

Finally, after identifying the needs of each actor, it is necessary to figure out what inputs, activities or systems changes (module 6 of the PAG) can help address the gaps, recognizing that prioritization will be necessary (based on assumed feasibility and effectiveness).

³ Excerpt from: Pelletier D, Corsi A, Hoey L, Faillace S, & Houston R. (2011). The program assessment guide: an approach for structuring contextual knowledge and experience to improve the design, delivery, and effectiveness of nutrition interventions. *The Journal of nutrition*, 141(11), 2084-2091.

Table 1: People and their five needs

Levels	Tool 1: Mapping the system People and responsibilities	Tool 2: Five needs 1) Awareness; 2) Knowledge, Information & Skills; 3) Commitment and Motivation; 4) Resources; 5) Support from others
National		
Region		
District		
Clinic		
Community		
Household		