

## Food and Nutrition Report

# Towards Improving Child Feeding Practices for Optimal Nutrition Outcomes in Burkina Faso

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### Abstract

**Background:** Infant and young child feeding (IYCF) practices are a critical factor in improving child nutrition.

**Methods:** This study was conducted to document the promotion of optimal child feeding practices in the North and Central Plateau regions in Burkina Faso. Data were collected through a review of available program data, field visits and interviews with key stakeholders involved in the process.

**Results:** A participatory approach was used to promote feeding practices in the two target regions. Interventions were delivered both at community level and through the health system. A mother-focused life cycle approach was used to deliver IYCF interventions at community level. The use of a participatory approach to scale up IYCF interventions fostered ownership and sustainability of the program. The development of a number of monitoring tools allowed the generation of real-time data about the program. In less than two years, the program reached 38,307 pregnant women and 63,955 mothers of children under two years of age with IYCF services in the Central Plateau region and 33,500 pregnant women and 67,200 mothers of children under two years of age in the North region. Despite this, much remains to be done to develop a full-fledged multi-sectoral system for addressing stunting in the two regions.

**Conclusion:** Our data indicate that IYCF interventions were successfully developed and improved in two regions of Burkina Faso. Efforts should be made to accelerate the implementation of a comprehensive multi-sectoral package for addressing stunting in the two regions and also in the other regions of Burkina Faso.

**Keywords:** Nutrition, Infant and Young Child Feeding, Stunting, Nutrition-sensitive, Burkina Faso.

### Background

Over the past decade, much effort has been made to improve child nutrition outcomes in Burkina Faso. Between 2008 and 2013, the prevalence of Severe Acute Malnutrition (SAM) decreased by 55% from 3.8% to 1.7%, while the prevalence of stunting decreased by 26% from 39% to 29% [1]. The country has also achieved some success in designing appropriate nutrition policies, aligning interventions towards a common results framework, and creating a more enabling environment for the implementation of multi-sectoral nutrition interventions [2]. Despite this progress, undernutrition is still a public health concern in the country. Indeed, nearly one million of children under five years of age are stunted [3], and so are at risk of compromised physical and cognitive development [4,5]. This situation may be partly due to the poor infant and young child feeding (IYCF) practices in the country. As of 2012, only 38% of children aged 6-23 months were exclusively breastfed during the first six months, 29% were breastfed within one hour after birth and 3.5% received a minimum acceptable diet [1].

The importance of optimal infant and young child feeding practices for child growth cannot be overemphasized. Research has shown that nearly one fifth of death of under five years of age could be averted through optimal breastfeeding practices during the first year by appropriate complementary feeding practices [6]. Moreover, the Lancet Series on maternal and child nutrition showed that 800,000 child deaths globally could be prevented through breastfeeding [7].

In an effort to improve IYCF practices, the Government of Burkina Faso has developed an Infant and Young Child Feeding (IYCF) Improvement Plan, with financial and technical support from the United Nations' Children Fund (UNICEF) and the European

Union, under an Africa's Nutrition Security Partnership (ANSP). The plan serves as an entry point for the implementation of multi-sectoral nutrition interventions to address stunting. It would be implemented over three phases comprising the testing of an integrated package of services organized through the life cycle approach (2013-2014); progressive extension of services in four different regions (2015-2022); and consolidation and documentation (2023-2025). The first phase of the plan was implemented in two regions of Burkina Faso (North and Central Plateau regions) which were selected because of their high levels of poverty and stunting rates. It was expected that program managers would be able to perfect the procedure and strategies, identify challenges in program implementation and generate some lessons that would guide the implementation of the IYCF plan during its subsequent phases.

This paper describes the process of introducing and improving IYCF interventions during the first phase in the two ANSP target regions. It also identifies success factors as well as challenges to the implementation and possible lessons for the scale-up phase.

## Methods

### Data collection

Data collection involved literature review of available program data, evaluation of the different tools designed to support IYCF activities at community level, field visits and interviews with key stakeholders involved in the process.

We conducted a literature review to gain more insights into the promotion of optimal feeding practices in the two ANSP target regions. We consulted a wide variety of program documents including the Burkina Faso's IYCF Plan (2013-2025); ANSP annual reports; ANSP external mid-term evaluation report; UNICEF monitoring reports; implementing partners' monitoring reports; and internal monitoring reports related to the process.

We reviewed several training and monitoring tools designed to build the capacity of service providers and monitor the implementation of the IYCF activities at the community level. Regarding the monitoring tools, there were specific registers for monitoring the activities of mother-to-mother support groups; community dialogues; the promotion of breastfeeding practices; and the promotion of complementary feeding practices.

Field visits were conducted to see, at first-hand, the implementation of the interventions and discuss the challenges in program implementation. Semi-structured interviews were also conducted with program beneficiaries. A number of meetings

were conducted with key stakeholders at national, regional and district levels. The findings on the qualitative data will be covered in a separate paper.

Changes in IYCF indicators were assessed using data from the annual nutrition surveys with the Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology conducted by the Government of Burkina Faso.

## Results

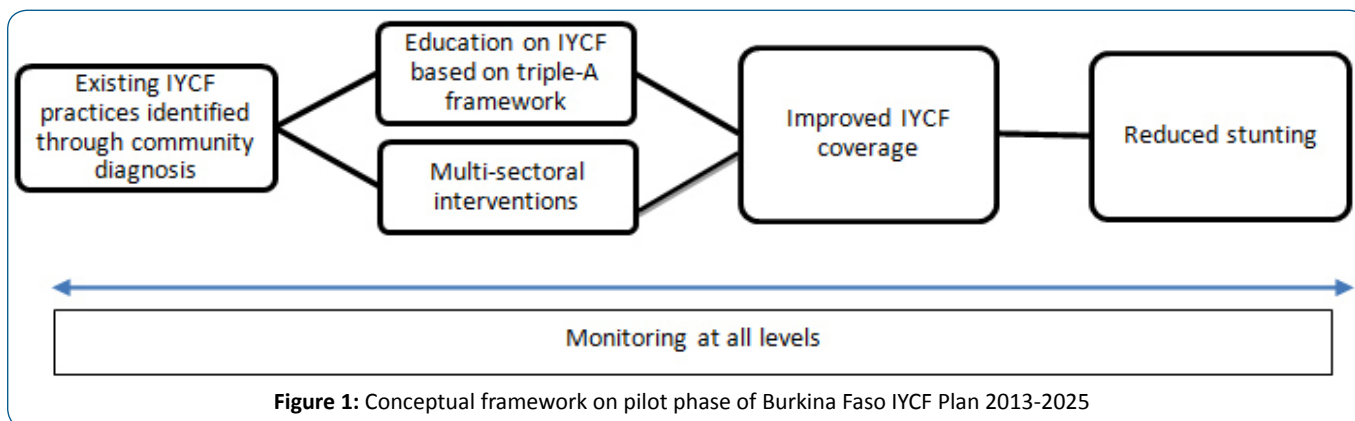
In the logical model adopted, the promotion of optimal feeding practices was expected to serve as an entry point for the implementation of comprehensive multi-sectoral nutrition interventions for addressing stunting (Figure 1). The approach used was based on the implementation of an integrated package of IYCF services focusing on the first 1000 days window of opportunity. It included conducting an initial community diagnosis of IYCF practices in each targeted community; engaging community leaders to deal with cultural and social barriers to IYCF practices; setting up of the mother-to-mother support groups as a platform for behavior change activities; and using specific tools to monitor the delivery of IYCF services.

### Initial community assessment of IYCF practices

The 'triple A' cycle approach (Assessment, Analysis and Action) was used to promote feeding practices in a participatory manner. In each target community, actions were designed following an initial community diagnosis of existing local IYCF practices. The community assessments were conducted in each of the target districts in 2013, at the outset of the program. In general, the identified barriers to appropriate IYCF practices were cultural and social beliefs, poor knowledge of caregivers about good feeding practices, influence of fathers- and mothers-in-law, and early introduction of liquid and semi-solid food. The process allowed a continuous dialogue with the community since a number of meetings were held in each of the target districts to discuss these determinants with them. The analysis of these determinants enabled IYCF interventions to be applicable to the local needs and contexts.

### Mother-to-mother support groups as platforms for behavior change activities

A mother-focused life-cycle approach was used to deliver an integrated package of IYCF interventions (Figure 1). In the two regions, a total of 570 communities made up of rural and peri-urban areas benefited from the interventions (Table 1). Each of these communities was within the catchment area of existing



**Figure 1:** Conceptual framework on pilot phase of Burkina Faso IYCF Plan 2013-2025

government-led community health services. A network of 13,538 mother-to-mother support groups was used as the main service delivery platform (Table 1). Each mother-to-mother support group was made up of 15 members. Mother-to-mother support groups met on a monthly basis. Participation to mother-to-mother support group was purely on a voluntary basis since mothers were not provided with any kind of financial initiatives. The support group provided a platform to discuss optimal IYCF practices, using awareness raising, communication and behavior change techniques. There were three categories of mother-to-mother support groups in each targeted community: pregnant women, lactating women with children under six months of age, and lactating mother with children aged 6-23 months. At village level, a community network system was put in place to ensure that every expectant mother enters the IYCF program and remains in it until the baby reaches the age of two years. The set of interventions designed for each of these support groups are summarized in Table 2.

**Community health workers and health workers as agents of change**

The IYCF interventions were implemented both at the community level and through the health system. At community level, the services were delivered by community health workers, local authorities, and other influential community members (Table 3). A total of 2,608 community health workers and 2,402

community leaders were involved in the two regions (Table 3). Community health workers were unpaid volunteers who were selected following the initial community assessments. Each community health worker was assigned five mother-to-mother support groups (three groups of mothers of children 0–23 months and two groups of pregnant women) to counsel and supervise. The involvement of community leaders was important in addressing the cultural and social barriers identified during community diagnoses. At health facility level, IYCF services were provided by nurses and midwives during antenatal and postnatal care visits, using a practical job aid. A total of 718 nurses and midwives were involved in the program (Table 3). A number of training sessions were conducted in the two regions to build the capacity of all the community health workers and health agents involved in the program.

The interventions were also implemented in partnership with a number of organizations (consortium of International Baby Food Action Network (IBFAN), *Association pour la Promotion de l’Alimentation Infantile* (APAIB) and *Action Chant de Femme* (ACF) in the Central Plateau region; two community-based organizations, *Appui Moral, Matériel et Intellectuel à l’Enfant* (AM-MIE) and *Solidarité et Entraide Mutuelle au Sahel* (SEMUS) in the North region). Technical support and supportive supervisions were also provided to the local partners involved in the program. In total, 178 staff of the community-based organizations work-

**Table 1:** Number of communities and support groups involved in the process

Regions	Number of targeted communities	Number of mother-to-mother support groups	
		Pregnant women	Lactating women
North region	260	2238	4482
Central Plateau region	310	2554	4264
Total	570	4792	8746

**Table 2:** Integrated package of IYCF services adopted in the Burkina Faso’s IYCF scaling up plan

Targeted groups	Components
Pregnant women	<ul style="list-style-type: none"> <li>• Promotion of antenatal care and assisted delivery</li> <li>• Promotion of good nutrition for pregnant women</li> <li>• Assessment of the perception of pregnant woman on early initiation of breastfeeding and exclusive breastfeeding for appropriate counseling</li> <li>• Promotion of early initiation of breastfeeding through counseling and creation of an enabling environment</li> </ul>
Lactating women with children under 6 months	<ul style="list-style-type: none"> <li>• Monitoring of mothers’ option about exclusive breastfeeding</li> <li>• Promotion of good nutrition among lactating women</li> </ul>
Mothers with children aged 6 – 23 months	<ul style="list-style-type: none"> <li>• Promotion of appropriate food introduction at 6 months</li> <li>• Promotion of breastfeeding continuation between 6 to 23 months</li> <li>• Evaluation of meals frequency practice and provision of adequate counseling</li> <li>• Monitoring of dietary diversity practices for appropriate counseling</li> <li>• Promotion of the consumption of fortified food</li> <li>• Promotion of appropriate hygiene in the infant feeding practices</li> <li>• Promotion of family planning</li> <li>• Promotion of the family gardening and small farming for food diversification</li> </ul>

**Table 3:** Number of community agents and staff involved in the implementation of the program

Regions	Nurses and midwives	Community health workers	Community leaders	Staff of community-based organizations
North	481	1404	1382	125
Central Plateau	300	1204	660	53
Total	718	2608	2042	178

ing with the program received training on the supervision and monitoring of IYCF interventions at community level (Table 3).

#### Use of specific tools to monitor the delivery of IYCF services

The set of training materials and registers, designed to monitor the implementation of IYCF activities, were piloted in selected districts in the two regions. Based on the findings, they were later adjusted to fit the needs of the program.

The following registers were developed:

- The register for monitoring the activities of mother-to-mother support groups was designed to record the number of women that attended each monthly session and the total number of sessions organized.
- The register for monitoring community dialogues was used to plan and record the main outcomes of quarterly community dialogues, which were conducted by community health workers. The dialogues involved discussions on the cultural and social barriers identified during the initial situational analyses. The register was also used to record the number of sessions conducted and the attendance of targeted participants to the sessions (Grandmothers, husbands, and others community leaders).
- The register on breastfeeding was used by community health workers to monitor the practice of exclusive breastfeeding. During monthly meetings with mothers of children under six months of age, community health workers recorded information about how mothers fed their infants during their first 6 months of life and used the opportunity to correct any deviations from recommended practices.
- The register on complementary feeding practices was used by community health workers to monitor the practice of complementary feeding by mothers of children aged 6 to 23 months. The information recorded was used to correct any deviations from recommended practices.

#### IYCF as an entry point for a multi-sectoral platform to address under nutrition

The mother-to-mother support groups offered the opportunity to adopt a multi-sectoral approach for tackling under nutrition. In the two regions, IYCF interventions were complemented gradually by interventions from other sectors. For instance, homestead food production with small-scale livestock and micro-gardening was initiated in the target communities. There was also an emphasis on food fortification at household level to address anemia among children aged 6 - 23 months in the North region. In addition, hygiene and sanitation practices were also promoted through the use of 'model households,' which provided a framework to demonstrate improvement in sanitation practices at household level. At national level, a partnership was initiated with the education sector to integrate key messages on IYCF into the training curricula of school children so that they could serve

as agents of change in their families and communities. A comic book, '*Poko, enfant de demain*' was developed for this purpose.

#### Change in key IYCF indicators

From 2012 to 2014, the program reached 38,307 pregnant women and 63,955 mothers of children under two years of age with IYCF services in the Central Plateau region. In the North region, 33,500 pregnant women and 67,200 mothers of children under two years of age benefited from IYCF services through community-based interventions.

The results from the annual SMART surveys showed an improvement in some key IYCF indicators in the two regions. Between 2013 and 2014, the rate of early initiation of breastfeeding rose from 13.6% to 38.8% in the North region and from 36.3% to 41.4% in the Central Plateau region. Likewise, an improvement was found in the rate of exclusive breastfeeding (from 39.7% to 41.5%) and the proportion of children receiving appropriate food between 6 and 8 months (45.5% to 51.4%) in the North region. A modest increase was also noted in the proportion of children with minimum adequate diet (4.5% to 7.2%). However, inconsistent trends were noted with these indicators in the Central Plateau region (Table 4).

#### Discussion

In this study, we assessed the implementation of the community based strategic option of the Burkina Faso' IYCF plan (2013-2025). Our results indicate that a participatory approach was used to promote infant feeding practices in the two target regions.

The use of the 'triple A' cycle helped to identify the critical determinants of IYCF practices and develop appropriate strategies to improve IYCF practices in the two regions. The use of a participatory approach within the framework of the program marked a real shift from the traditional approaches of behavior change simply based on knowledge acquisition and sensitization through generic nutrition messages. The approach used enables greater ownership by the beneficiaries and is more likely to lead to sustainable results. A similar approach has been used in other settings to improve IYCF practices [8,9].

Another key driver to success was the use of mother-to-mother support groups as the main delivery platform of IYCF. This approach was instrumental in improving IYCF practices in the target regions. Research has shown that positive results regarding IYCF practices could be obtained if the approaches used responded to the needs, concerns and perceptions of mothers [10]. The involvement of community health workers and community leaders also laid the foundation for sustainable improvement of IYCF practices in the target regions.

The different tools which were developed were useful in monitoring the process and tracking progress towards the attainment of the objectives of the intervention. However, some community health workers found them to be time-consuming.



**Table 4:** Evolution of key IYCF indicators in the two regions

	North region				Central Plateau region			
	2012	2013	2014	2015	2012	2013	2014	2015
Early initiation of breastfeeding	24.1 [19.0-29.2]	13.6 [7.7-19.6]	38.8 [33.4-44.2]	50.6 [46.9-54.3]	36.3 [30.3-42.3]	41.4 [34.8-47.9]	42.1 [38.0-46.2]	62.8 [55.7-69.4]
Exclusive breastfeeding	62.0 [50.6-73.4]	39.7 [33.5-45.9]	54.9 [43.9-65.9]	41.5 [35.2-48.1]	42.4 [30.4-54.4]	65.9 [50.7-81.0]	47.4 [38.8-56.1]	34.2 [22.6-48.0]
Introduction of appropriate food (6-8 months)	33.3 [17.0-49.7]	45.5 [36.3-54.6]	51.4 [34.5-68.2]	54.4 [46.6-61.9]	51.7 [40.5-62.9]	86.8 [75.6-98.1]	64.7 [52.7-76.7]	55.8 [40.7-69.9]
Minimum adequate diet	0.0 [0.0-0.0]	4.5 [3.1-5.8]	7.2 [3.9-10.5]	11.2 [8.7-14.2]	0.9 [0.2-1.7]	21.1 [15.1-27.0]	6.4 [4.1-8.7]	6.1 [3.1-11.9]

Efforts should therefore be made to simplify the tools and make them more user-friendly.

It is worth mentioning that the implementation of the program had not translated in a significant improvement in IYCF indicators in the two regions. Only modest changes in key IYCF indicators were noted in both regions, with the Central Plateau region even showing a downward trend for some of the indicators. The use of the annual SMART surveys to assess the impact of the program is questionable since these surveys were not designed to specifically assess the changes in IYCF indicators in the catchment areas of the program. Efforts should therefore be made to put in place a sound monitoring and evaluation system that would not only allow investigators to collect data on specific indicators about the program, but also to better track progress towards the achievement of the program's objectives.

While we did not assess the effect of IYCF interventions on stunting levels in this paper, we observed that the multi-sectoral system that is currently in place in the two regions needs to be strengthened if stunting is to be addressed in the long run [11]. There is a need to develop a comprehensive package of nutrition-sensitive interventions along with IYCF services. Nutrition-sensitive interventions were not identified in the planning stage, but were introduced gradually during the implementation of the program. The health sector was the dominant sector in developing and implementing the interventions. More efforts should, therefore, be made to engage other sectors such as agriculture and social protection through partnership with such organizations as the Food and Agriculture Organization (FAO) and the World Food Program (WFP).

### Conclusion

Our results indicate that child feeding practices were successfully promoted in the two ANSP target-regions of Burkina Faso. Key drivers to success were the use of a participatory approach to program implementation, the use of mother-to-mother support groups as the main delivery platform and the design of a number of monitoring tools to generate real-time data on the program. However, efforts should be made to complement IYCF interventions with a comprehensive package of nutrition-sensitive interventions so as to enable the implementation of a comprehensive multi-sectoral package for addressing stunting in the long run.

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### Author's contribution

Roger Sodjinou, Djibril Cisse, Felicite Tchibindat and Noel Zagre conceived the study. Sylvestre Tapsoba and Biram Ndiaye contributed to the design of the study. Roger Sodjinou led data collection and wrote the first draft of the manuscript. All co-authors reviewed the manuscript and approved its final version for submission.

### Conflict of Interest

The authors declare that they have no competing interests associated with this study. The opinions and points of view

expressed in this article are solely those of the authors and do not necessarily reflect the official positions or policies of their affiliated institutions. The study was funded by the European Union through the EU-UNICEF Africa's Nutrition Security Partnership (ANSP).

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