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AIDS SUPPORT AND TECHNICAL ASSISTANCE RESOURCES



FOOD BY PRESCRIPTION IN KENYA

AN ASSESSMENT CONDUCTED IN 2009

MARCH 2010

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ACRONYMS

AED	Academy for Educational Development
AIDS	Acquired immune deficiency syndrome
AIDSTAR-One	AIDS Support and Technical Resources
ANC	Antenatal care clinic
ART	Antiretroviral therapy
BMI	Body mass index
CCC	Comprehensive care centre
CHW	Community health workers
CME	Continuing medical education
DNO	District nutrition officer
FANTA-2	Food and Nutrition Technical Assistance II
FAO	Food and Agricultural Organization
FBF	Fortified blended flour
FBP	Food by Prescription
FGD	Focus group discussion
GAM	Global acute malnutrition
GOK	Government of Kenya
HFA	Height-for-age
HIV	Human immunodeficiency virus
HMIS	Health management information system
KEMRI	Kenya Medical Research Institute
LTF	Loss/lost to follow-up
MCR	Monthly consumption report
MMS	Ministry of Medical Services
MOH	Ministry of Health
MPHS	Ministry of Public Health and Sanitation
MUAC	Mid-upper arm circumference
NASCOP	National AIDS and STI Control Programme
NHSSP	National Health Sector Strategic Plan

OI	Opportunistic infections
OVC	Orphans and vulnerable children
P/PP	Pregnant and postpartum
PCEA	Presbyterian Church of East Africa
PEPFAR	President's Emergency Fund for AIDS Relief
PGH	Provincial general hospital
PLHIV	People living with HIV/AIDS
PMTCT	Prevention of mother-to-child transmission
PNO	Provincial nutrition officer
QI	Quality improvement
RDA	Recommended daily allowance
RUTF	Ready-to-use therapeutic food
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing
WFH	Weight-for-height
WHO	World Health Organization

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EXECUTIVE SUMMARY

An assessment was conducted in Kenya in October 2009 in order to examine the national Food by Prescription (FBP) program, study program strengths and challenges, and document lessons learned and promising practices. AIDSTAR-One conducted the assessment at the request of the President's Emergency Plan for AIDS Relief (PEPFAR) Care and Support Technical Working Group (TWG) and with the participation of the USAID Mission in Kenya, the National AIDS and STI Control Programme (NASCO) and Academy for Educational Development (AED).

Data for the assessment was collected by qualitative and quantitative research methods, including focus group discussions, individual client interviews, provider interviews, and key informant discussions with policy makers and program managers. The assessment team captured beneficiary perspectives and client satisfaction; provider perspectives on patient outcomes as well as task shifting; and key information perspectives on issues such as integration, data collection, training and policy.

The assessment found that, overall, the Food by Prescription program in Kenya is an excellent intervention, well-appreciated by clients and providers alike in terms of improving nutritional status and health outcomes and supporting adherence to and efficacy of ART. With an eye to improving an already effective program, this assessment identified six critical areas for quality improvement in order to facilitate graduation from the program, reduce re-entry, enhance integration and encourage sustainability. These areas involve: training, supervision, referrals, community linkages, reporting and data management, and policy.

1. Training

- Strengthen nutritional assessment, counseling and education at the facility level
- Include pre-service training on nutrition and HIV for health care workers
- Provide for regular refresher trainings in nutrition and HIV and FBP
- Provide training in data management

2. Supervision

- Target FBP during routine supervisory visits
- Provide regular feedback to health care providers
- Provide supervision for community workers

3. Referral Systems

- Strengthen referrals system within hospital facility
- Strengthen referrals between different levels of health facilities
- Strengthen community referral systems

4. Integration and Linkages

- Map existing health, nutrition and livelihood support mechanisms
- Strengthen linkages to other existing programs
- Integrate data collection and reporting with other HMIS
- Foster inter-sectoral cooperation between Ministries

5. M&E and reporting

- Conduct post-intervention monitoring to capture re-entry data
- Reorganize reporting structure to better engage government officers
- Ensure harmonized data collection tools
- Introduce appropriate technology for improved data management
- Integrate FBP reporting into existing data management system and reporting mechanisms for ART

6. Policy

- Create a national indicator
- Foster government ownership of FBP
- Map current Title II and PEPFAR food programs to support geographic overlay between food aid and targeted HIV supplementation

Furthermore, the assessment identifies key promising practices which are currently implemented in Kenya and it offers suggestions for critical opportunities for other PEPFAR-supported countries to consider in order to roll out efficient and effective nutrition and HIV/AIDS services:

Promising Practices

- Establish national policy, guidelines and strategy for nutrition and HIV.
- Provide training to staff on FBP delivery including training on nutritional assessments, nutrition counseling, data management and supply chain management.
- Support effective and continuous counseling and education.
- Integrate nutrition services with other HIV/AIDS services.
- Integrate nutritional data with ART and other data.
- Leverage existing community programs and to mobilize and train communities on proper nutrition and food security to maximize benefits of the FBP program.

Critical Opportunities

- Create national nutrition and HIV indicator(s) to be synchronized within the national health management information system (HMIS).

- Harmonize program entry and exit criteria in line with WHO recommendations.
- Foster government ownership from the onset, both financially and technically.
- Align USG humanitarian food contributions with HIV-related nutrition efforts.
- Prepare for loss and attrition of trained staff by supporting Continuing Medical Education (CME) and TOTs and regular refresher training.
- Develop a mechanism for supervision through regular visits and use of checklists.
- Utilize support supervision and feedback from reporting to identify and address weak links in service delivery and program implementation.
- Provide additional training and supervision to staff who take on increased workload
- Training and supervision activities should be designed and implemented with an eye to contributing to QI and improving staff retention.
- Emphasize integration of FBP with other services at comprehensive care centers by training other health cadres and educating providers and clients about comprehensive care and treatment.
- Introduce a mechanism to capture relapse data on clients who have graduated and re-entered the program.
- Ensure that reporting structure is designed to involve key government officials and relevant stakeholders.
- Institute a feedback mechanism so that facilities receive regular feedback based on the reports they submit and can implement performance improvement measures.
- Establish national program standards for performance indicators, including benchmarks for supervision, and generate buy-in at all levels.
- Link FBP clients with livelihood and food security support programs.
- Support a staff position to foster and maintain coordination of nutrition activities among government agencies and implementing partners.
- Establish inter-sectoral working groups to foster communication and collaboration between Ministries of Health, Agriculture and Economic Development.

Kenya's FBP program offers a number of promising practices to other countries and highlights critical opportunities. Hopefully, the results of this assessment can support partners in further strengthening an already successful program so that it will remain effective and sustainable for many years to come. Furthermore, other countries can learn from the Kenya experience to design and implement successful nutritional assessment, counseling and support initiatives.

BACKGROUND

INTRODUCTION

The purpose of this assessment is to examine the national Food by Prescription (FBP) program in Kenya in order to understand program strengths and challenges and document lessons learned and promising practices that have emerged during implementation. AIDSTAR-One conducted the assessment at the request of the President's Emergency Plan for AIDS Relief (PEPFAR) Care and Support Technical Working Group (TWG) and with the support and participation of the USAID Mission in Kenya, the National AIDS and STI Control Programme (NASCOP) and Academy for Educational Development (AED).

The FBP program targets vulnerable adult people living with HIV (PLHIV), pregnant and post partum women and orphans and vulnerable children (OVC). The program currently reaches 10,000 new clients, and 10,000 revisiting clients every quarter, in seven provinces of Kenya, namely Central, Coast, Eastern, Nairobi, Nyanza, Rift Valley and Western. The program provides comprehensive services, including nutritional assessment and monitoring, education and counseling, point-of-use water treatment, and fortified blended flour to malnourished PLHIV via health clinics, as part of comprehensive care and treatment. The program is designed to dispense therapeutic food and water treatment products to individual patients, based on a prescription issued by a clinician. OVCs are referred to clinics for nutritional assessment, and receive a prescription if they qualify. This intervention is one of a growing number of programs that link nutritional support with HIV treatment. Such interventions reflect the increasing recognition among governments, donors and implementers of the need for integrating nutrition support into clinical care for PLHIV.¹ Due to the underlying context of household food insecurity, malnutrition and poverty among the general population, many food and nutrition support interventions face challenges in providing support only to HIV-infected and affected people when such need exists among the larger population. The context raises clinical, practical and moral concerns when it comes to determining enrollment and graduation criteria, commodity ration and sustainability. Thus, it is informative to learn from the FBP program design and implementation how these challenges are being addressed and mitigated, where possible.

Data for the assessment was collected by qualitative and quantitative research methods, including focus group discussions, individual client interviews, provider interviews, and key informant discussions with policy makers and program managers. The assessment team captured beneficiary perspectives and client satisfaction; provider perspectives on patient outcomes as well as task shifting; and key information perspectives on issues such as integration, data collection, training and policy.

This report describes some of the successes and challenges of the program thus far, and offers critical opportunities and promising practices to share with other countries implementing interventions that provide nutritional support to PLHIV, as well as for internal review to improve

¹ Byron, Elizabeth, Stuart Gillespie, Mabel Nangami. *Integrating Nutrition Security with Treatment of People Living with HIV: Lessons being learned in Kenya*. IFPRI: September 2006.

the Kenya program. The assessment intends to contribute to the growing evidence base on integrating nutrition with clinical care and ARV treatment, and underscores particular elements and considerations that can improve patient outcomes and enhance program effectiveness.

KENYAN CONTEXT

There are a number of contextual elements that are important to consider when assessing the FBP program in Kenya, namely: food insecurity and malnutrition throughout the country, as well as regional drought and food shortages and the global economic crisis; limited human resources; and reorganization in the Ministry of Health (MOH) in the aftermath of the post-election violence.

GENERAL FOOD INSECURITY AND MALNUTRITION

As in other countries in East Africa, a significant number of PLHIV in Kenya are malnourished. Furthermore, the FBP program targeting HIV-infected and affected individuals operates within an environment in which malnutrition is highly prevalent among the general population. The Kenya Demographic and Health Survey reported 35% stunting, 7% wasting and 16% underweight among children under-5 years (KDHS 2008-09).

According to food security assessments conducted in July and August 2009, food security has declined dramatically in the pastoral and agricultural regions of the country. The situation is characterized by “critical and deteriorating nutrition conditions throughout the country, including in areas not previously experiencing significant global acute malnutrition rates.”² This decline in food security can be attributed to the impacts of prolonged drought, a rise in prices for food and non-food items, and the affects of post-election violence. An estimated 3.8 million rural people are classified as extremely food insecure requiring urgent interventions. Furthermore, reports have identified food insecurity among 100,000 people displaced by the post-election conflict, 3.1 million urban inhabitants, mostly residing in slums, and 2 million rural HIV patients. Nutrition surveys carried out by the MOH, UNICEF and partners reveal high levels of child malnutrition. In five of the eight districts assessed in the survey, global acute malnutrition (GAM) rates were above the WHO emergency threshold of 15 percent, measured using weight for height.³ Malnutrition rates will likely worsen in coming months due to worsening food and nutrition security.⁴

The interactions between malnutrition and HIV exacerbate poor nutritional status and weakened immunity. The goals of nutritional interventions are to bolster nutritional status of malnourished PLHIV in order to improve their energy and immune functions, as well as prolonging the pre-ART period, preventing wasting resulting from increased energy needs, and improving adherence of those on ART. In periods and locations of severe food insecurity and nutrition crises, FBP clients are more likely to depend on the FBF as their primary source of food and/or share it with household members. These trends have implications for length of time on treatment and treatment effectiveness.

² USAID DCHA/OFDA. *Kenya –Food Insecurity: Situation Report #1, Fiscal year 2009*. September 2, 2009.

³ Rates of child malnutrition in pastoral areas (% of children under 5 years experiencing acute malnutrition): Wajir 22%, Mandera 22.5%, Samburu 22%, Turkana 24%, Marsabur 20%. (Source: NGOs, UNICEF and MoH Nutrition Surveys)

⁴ FEWSNET. Kenya Food Security Update, August 2009.
http://v4.fews.net/docs/Publications/Kenya_FSU_August09_final.pdf

HUMAN RESOURCE LIMITATIONS

According to the Kenya Nutrition and HIV/AIDS Strategy (August 2008), there are approximately 1,960 doctors, 4,000 clinical officers, 16,227 nurses and 700 nutritionists working in the public sector. Although Kenya has more trained nutritionists than most other sub-Saharan African countries, there are still not enough professional nutritionists to serve at every health facility in the country. In the facilities where there is a nutritionist, s/he usually has multiple responsibilities in addition to FBP management. District nutritionists may be responsible for large catchment areas; they must visit other facilities frequently and, consequently, they are often not present at the district hospital. Therefore, task shifting is often necessary to share the responsibility for the nutritional assessment, monitoring, counseling, and product dispensing in the FBP program.

MINISTERIAL RESTRUCTURING

According to the Government of Kenya (GoK), 663,000 people were displaced in Nairobi and in areas across Rift Valley, Western, Nyanza, and Coast provinces during the violence associated with the December 2007 election and subsequent civil and political unrest.⁵ Approximately 1,000 people were killed. As a result of the power sharing arrangement that followed the post-election violence, the MOH split into two ministries: the Ministry of Medical Services (MMS) and the Ministry of Public Health and Sanitation (MPHS). Although the Nutrition Unit was at one time under MMS, NACSOP and all nutritionists sit under MPHS. However, the health facilities where nutritionists sit are administered under MMS. These changes in organizational and reporting structures have created some challenges in terms of training, supervision, reporting and program management.

FBP PROGRAM DESCRIPTION

In Kenya, there is a National HIV/AIDS Strategic Plan which emphasizes the need to address malnutrition among those who are infected with and affected by HIV. Furthermore, *Kenya National Guidelines on Nutrition* and *HIV/AIDS Tool Kit for Service Providers in Comprehensive Care Centers* support the integration for nutrition into HIV treatment.

PEPFAR supports the FBP program, which provides nutritional support to malnourished HIV-infected adults, pregnant and lactating women and orphans and vulnerable children (OVC). The program is implemented through a collaborative project by the NASCOP in the MOH, with USAID through its partners AED and Insta Products Ltd., a Kenyan food manufacturing company. The program began with a two-year pilot phase in 2006, during which time the program was administered by Insta, the technical assistance provided by USAID's FANTA Project. The program entered the adaptation/replication phase in March 2008 with new funding for five years. The current phase is being implemented as a collaborative public private partnership by AED, MMS, MPHS and Insta Products Ltd., with AED focused on programmatic components and Insta responsible for production and distribution. At the end of the project period, it is expected that initiative will have matured and NASCOP assume full responsibility.

The program's objective is to provide a set of nutrition interventions as part of comprehensive care and treatment of PLHIV, thus preventing malnutrition, rehabilitating malnourished clients, and improving adherence to and efficacy of ART. The interventions include nutritional assessment, monitoring and counseling, dispensing of energy and nutrient-dense food products, and provision of safe water counseling and water treatment solution.

⁵ USAID DCHA/OFDA. *Kenya –Food Insecurity: Situation Report #1, Fiscal year 2009*. September 2, 2009.

The food product provided is a fortified blended flour (FBF), which is a blended pre-cooked corn-soy flour fortified with vitamins and minerals in varying quantities that is cooked into a porridge (locally known as *uji*). Insta Products manufactures three different formulations of the flour which are designed for different populations, namely: *First Food*, *Foundation Plus* and *Advantage*. *First Food* is designed for orphaned and vulnerable children, ages 6 months to 9 years, diagnosed with moderate under-nutrition. *Foundation Plus* is given to moderately malnourished OVCs 10-17 years as well as adults 18 years and above. *Advantage* is designed for pregnant and post-partum women. [See Annex 2: *Management of uncomplicated under-nutrition using Food by Prescription* for more detail.]

At the time of the assessment, ready-to-use therapeutic food (RUTF) was not yet being provided however there are plans to incorporate RUTF into the program. According to the national protocol, RUTF alone is used to treat severe under-nutrition in 6-59 month-old children. In treatment of severe under-nutrition in older children and adults, a combination of RUTF and FBF is recommended. RUTF is currently being produced at Insta and in the process of being certified by UNICEF and the Kenya Bureau of Standards. At the time of the assessment, 50 metric tons of RUTF were positioned in a Nairobi warehouse.

The prescription recommends daily use of FBF as a supplement to other foods, in order for the client to intake one recommended daily allowance (RDA) of nutrients, as recommended by WHO. (FAO/WHO, 1998). When the program was designed, it was estimated that length of treatment would be approximately four months, during which time clients would be able to regain healthy nutrition and reach the graduation criteria. The program eligibility and exit criteria are summarized below; please see Annex 2 for more detail.

Table 1: FBF eligibility and exit criteria

Client Category	Eligibility criteria	Exit criteria
Adult PLHIV (18 years and above)	BMI <18.5 kg/m ²	BMI ≥ 20 kg/m ²
Pregnant or postpartum women (P/PP)	MUAC between 22-24cm	BMI ≥ 20 kg/m ²
OVC (6 months-5 years)	Weight for height (WHZ) <-2 z-score	WHZ ≥ -1.0 z-score
OVC (6-9 years)	BMI for age <-2 z-score	BMI for age ≥ -1.0 z-score
OVC (10-17 years)	BMI for age <-2 z-score	BMI for age ≥ -1.0 z-score

Although there are some differences in program implementation across facilities depending on human resources and physical space available at each site, the basic design is as follows: A client is referred to the nutritionist (or responsible cadre) at the Comprehensive Care Center (CCC) either from another unit of the facility or from within the CCC. (CCCs are the outpatient care units for treatment of PLHIV located within hospitals). The client's nutritional status is assessed, and if eligible, client receives a prescription for FBF. Eligible clients should also receive a bottle of WaterGuard. All clients receive nutritional counseling, regardless of their eligibility for FBF. Depending on storage, product is dispensed from the CCC where the client receives counseling, or from a nearby store. The nutritionist (or responsible cadre) fills out a number of forms: the patient form, the daily consumption register (DCR), the monthly consumption register (MCR), and a tally record book (this nutrition register had not yet been rolled out to all sites at the time of this assessment). The facilities send the MCR, which includes information about stock-on-hand and

quantity to reorder, directly to AED, which then places orders with Insta Products, which distributes the requested quantities to facilities.

The program is currently implemented at 61 primary facilities and 134 satellite sites throughout the country. There are plans to expand to 250 primary facilities and their satellite sites by 2013.

REPORT STRUCTURE

This report synthesizes data collected through interviews and focus group discussion (FGD) and presents provider and beneficiary perceptions about the FBP program. Specifically, client perceptions are organized around experiences related to access to services, waiting times, products and counseling and education. Providers gave feedback on management of client load, resources for implementation, record keeping and reporting and integration. Both clients and providers highlighted accomplishments of the program as well as challenges, and offered their recommendations for program improvement. The report then explores dimensions of training and supervision, which emerged as critical program components. It then analyzes integration, both areas of success and opportunities for improvement, focusing on client referrals, staff task shifting, community linkages, product management, data collection and reporting. Finally, the report concludes with recommendations for the Kenya FBP program and promising practices to share with other countries implementing programs to provide nutritional support to PLHIV.

RESEARCH OBJECTIVES, DESIGN AND METHODOLOGY

OBJECTIVES

The aims of the assessment included:

1. Review the national policy environment regarding HIV and nutrition, specifically integration of FBP into clinical HIV care and support in Kenya.
2. Identify critical program elements for quality improvement and greater integration of FBP programs, including: (a) model design and implementation; (b) program integration; (c) staffing models; (d) patient flow and time management, and (e) links to community mobilization and support.
3. Review and assess training and supervision, including training and supervision of community-based staff where relevant.
4. Analyze time management of health staff, patient management and flows.
5. Assess monitoring and evaluation efforts, quality improvement initiatives if any, as well as linkages of FBP with health information systems and sustainability.

DESIGN

This was captured FBP clients' and providers' perceptions on the program and involved interviews and close collaboration with an array of stakeholders. The AIDSTAR-One assessment team worked with USAID/Kenya Mission, which provided support for the assessment activities. Furthermore, CDC funds many FBP sites visited and provided input into this assessment. AED provided the AIDSTAR-One assessment team with background information, logistical support, recommendations for Kenyan consultants, as well as criteria for site selection. NASCOP provided letters of introduction to hospital administrators and clinic directors and participated in policy discussions. Additional stakeholders interviewed included provincial and district nutrition officers, hospital administrators and other implementing partners [See Annex 3 for list of stakeholders interviewed].

METHODOLOGY

Research site sampling

Sixteen sites were selected purposively in an effort to capture the diversity of facility types and population characteristics across varying social and geographic contexts (Table 1). The AIDSTAR-One assessment was conducted primarily in CCC settings in four Kenyan provinces, with a single facility located in a fifth.

Table 2: Sites visited in AIDSTAR-One assessment

Province	Site name	Clients ^a	Type	KEPH Level /Equiv.
Central	Kikuyu PCEA Mission Hospital	107	Mission	District Hospital Equiv
Central	Nazareth Hospital	55	Mission	District Hospital Equiv
Central	Nyeri Provincial General Hospital	151	GoK	Provincial Hospital
Central	Thika District Hospital	257	GoK	District Hospital
Eastern	Chogoria PCEA Hospital	45	Mission	District Hospital Equiv
Eastern	Embu Provincial General Hospital	186	GoK	Provincial Hospital
Eastern	Machakos District Hospital	184	GoK	District Hospital
Nairobi	Coptic Hospital - Ngong Road	68	Mission	District Hospital Equiv
Nairobi	Mbagathi District Hospital	268	GoK	District Hospital
Nairobi	Pumwani Maternity Hospital	94	GoK	City of Nairobi
Nyanza	FACES Lumumba Health Center	191	NGO/GoK	Health Center
Nyanza	Kisumu District Hospital	224	GoK	District Hospital
Nyanza	Nyanza Provincial General Hospital	484	GoK	Provincial Hospital
Nyanza	Siaya District Hospital	241	GoK	District Hospital
Nyanza	St Joseph's Mission Hospital - Nyabondo	225	Mission	Sub-district Equiv
Western	Maseno Mission Hospital	139	Mission	District Hospital Equiv
Total Clients		2,919		

^a NHP Participants as of Quarter 4 - January-March 2009.

The criteria for site selection included:

1. Site level (focus on primary sites only): The Kenya Essential Package for Health (KEPH) identifies different levels of facilities from local dispensaries through national centers of excellence. Provincial and district hospitals are the frontline for HIV outpatient treatment, providing care and support through the CCCs. Many faith-based or “mission hospitals” are of similar size, patient load or have equally large catchments, which qualify them as provincial or district hospital “equivalents.”
2. Provider type: In many sites, hospital nutritionists serve as clinical coordinators of the FBP program, while in others, responsibility for determinations of eligibility, patient management and food distributions may fall to social workers, nursing staff or other health providers. Selection assured inclusion of sites with and without nutritionist supervision.
3. Work load levels: Depending primarily on local prevalence of HIV infection and levels of household food insecurity, patient flows in CCCs and the scope of FBP distribution vary considerably. An effort was made to capture facilities with both moderate and high patient volumes.

4. Urban vs. rural: While all of the facilities chosen are in cities or large towns, sites were selected in order to sample an array of catchments areas ranging from rural to urban.
5. Food insecurity rates: Although household food insecurity is encountered throughout the country, its prevalence varies regionally. The assessment covered areas in Eastern and Central province often considered as relatively food secure, as well as those areas with greater risk of drought conditions, higher poverty levels or urban areas with disadvantaged populations.
6. Management Performance: The assessment team did not have prior information about variations in management considerations, although key elements of clinical management became evident in the course of the study.

One of the facilities deviated from the general pattern of CCC food distribution sites. At Pumwani in Nairobi, the nation's (and sub-Saharan Africa's) largest maternity hospital, FBP distribution is administered in the antenatal care (ANC) clinic. A CCC adjoins the clinic, the product of an ongoing research project. Here, the majority of patients are referred through Prevention of Mother-to-Child Transmission (PMTCT) services at the ANC clinic rather than through the CCC.

Methods and materials

The assessment was carried out by three teams covering different geographic regions, each team covering five to six facilities. One team surveyed five sites in Nyanza, and one site in Western province. Another surveyed two Central province sites north of Nairobi, most of the Eastern sites, and Pumwani Hospital in Nairobi. The Nairobi team captured the major urban FBP sites, a Central province site peripheral to the city, and an Eastern province facility south of the capital.

Each team was composed of two national consultants and one or two assistants working as transcribers. The teams were interdisciplinary, with representation by social scientists as well as nutrition and food security professionals. Two of the teams were also joined by expatriate AIDSTAR-One staff serving as team leaders. The Nairobi team was led by a national nutrition expert and joined for two days by a nutrition specialist from the USAID Mission.

The assessment was conducted using a mixed-methods design, combining qualitative and quantitative data collection techniques. Qualitative data were collected in 33 interviews with key informants, who included program experts at the national level, hospital administrators, provincial nutrition officials and several seasoned providers who were local experts on FBP implementation. To capture the clients' point-of-view, a total of 28 focus groups discussions were carried out across all sites. Key-informant interview guides and focus group moderator guides were administered flexibly, attuned to respondent knowledge and focus group composition and responsiveness.

Numeric data were also collected using two structured questionnaires. A convenience sample of active FBP patients not interviewed in the focus groups sessions was surveyed in each site. A total of 139 patients across all facilities were interviewed about their general care and support use, FBP utilization, as well as perceptions of service availability and quality. Facility sub-sample sizes varied considerably with patient flows on the days the sites were visited. Client sample characteristics and regional distribution can be seen in Table 3.

Table 3: Client survey sample characteristics

Characteristic	n	%
Gender		
Male	38	27.3
Female	101	72.7
Age^a		
15-19	1	0.7
20-24	16	11.6
25-29	15	10.9
30-34	39	28.3
35-39	18	13.0
40-44	13	9.4
45-59	16	11.6
50-54	7	5.1
55 & older	13	9.4
Region		
Nairobi	20	21.6
Central/Eastern	54	31.6
Nyanza/Western	65	46.8

^a N=139, missing value accounts for reduced analytic sample.

A total of 28 provider interviews were also conducted with the individual(s) responsible for FBP at the facility. In most cases an additional provider with knowledge of different aspects of care and support services was also interviewed, such as the nurse ‘in-charge’ or medical officer. In several cases, information was collected in a group interview format with providers and these data were collapsed into a single ‘best observation’ for each site.

Data Analysis

Focus group interview transcripts were translated into English from Kiswahili, Kikamba, Kikuyu and Luo. Texts were entered electronically in the field following the field session. Notes from key informant interviews were entered electronically during or immediately following fieldwork. Qualitative analysis for this preliminary drafting remains based on a weight of impression from careful reading of the text, word searches and debriefing with teams following fieldwork.

Numeric data were entered from paper-and-pencil forms into an Excel database and then analyzed using Stata. Variables are in the majority of cases dichotomous, either based on yes/no, present/absent or adequate/not adequate preference responses. However, both patient and provider forms include some ordinal scaling and interval-level estimates (e.g. distance to clinic, waiting room times). Most analysis presented here is descriptive, based on univariate analysis of frequencies and percentages. Selected bivariate analyses testing relationships between respondent characteristics and perceptions are also reported, as well as differences between types of sites and relevant concerns in service quality. Additional facility level analyses draw on aggregate client data from sites, recognizing limitations reasoning from limited facility subsamples.

IRB approval

A proposal of the assessment had been submitted to the Institutional Review Board (IRB) at Kenya Medical Research Institute (KEMRI) for consideration of scientific and ethical issues. Approval to conduct the assessment was authorized by the KEMRI/National Ethic Review Committee on June 24, 2009. It was also approved by the JSI Human Subjects Committee on March 2, 2009.

PERCEPTIONS OF FBP PROGRAM

BENEFICIARY PERCEPTIONS

In general, most of the beneficiaries have positive perceptions of the FBP program, as illustrated by client perceptions of importance of services (see Table 5). They appreciate how the *uji* helped them regain strength, appetite, weight and energy as well as supported adherence to ART (some reported drinking *uji* when swallowing their medicines). They experience improved response to ARVs and reduced side effects (such as nausea). Some clients believed that stigma was reduced because they looked healthier and were able to engage in social events and other activities. One FGD participant described:

“I had diarrhea, I was very weak, I also suffered from short breaths. When I was put on mogo [flour], I regained my strength and could walk without losing my breath.”

(Female FBP client, Nyanza Province)

During an exit interview, another patient reported:

“I find the service very good for it has lengthened my life. If it were not for the services, I would have died.”

(Male FBP client, Nyanza Province)

Overall, most patients are satisfied with the services, finding them convenient, useful, and beneficial to their health. For the most part, clients appreciated the CCC as a “one-stop shop,” where services are integrated and can be accessed all in the same place and usually on the same day (e.g. regular medical check-up, monthly dosages of ARVs and other medications, diagnosis and treatment of opportunistic infections, psychosocial support, linkages to community support and nutrition services including FBP). However, there were some privacy concerns about the CCC’s proximity to other hospital departments. For example, clients at the Kikuyu PCEA Hospital were concerned that the physical distance between the CCC and the general outpatient clinic was too close and that confidentiality of their HIV status was compromised.

Through focus group discussions and individual interviews, perceptions were reported with regard to: services (including access, waiting time, and staff), products, and education and counseling. Furthermore, beneficiaries described challenges they observed and offered their recommendations.

SERVICES

Access

Most clients have to incur some transport expense in order to travel to the FBP site. While some clients live within walking distance to the facility, a number of people reporting traveling more than 10 kilometers. Some clients opt to travel to a facility that is further from their home because of concerns about stigma. Others come because it is the nearest facility to offer the FBP services, and they value the services enough to warrant the travel. Clients may also perceive a higher quality of services in the selected facility.

In analyzing individual client surveys, it appeared that those living further away from the clinic may not adhere as well to the recommended FBP regimen as those who live closer. A greater proportion of those living at distances that require transport reported non-adherence to recommended FBP consumption in greater proportion than those living within walking distance (22% vs. 11%). (“Non-adherence” is defined as missing appointments and/or not consuming the recommended quantities of FBF.) However, querying actual consumption revealed that reported amounts were similar among both distance groups.

Waiting Time

The perception of wait times and their estimation varied considerably. The majority of clients feel that waiting time at the clinic is reasonable, although clients at some sites did report that waiting times were too long.

Waiting time varies, depending on the facility and on the particular day. On average, clients reported shorter waits in Nairobi area hospitals (49 minutes) compared with Central/Eastern (77 minutes) and Nyanza/Western (123 minutes) facilities, differences between regions proving statistically significant ($F=8.08, p<0.001$). As is evident in Figure 1, mean estimated times for mission hospitals were also generally better than those experienced at public or other secular facilities (71 minutes vs. 111 minutes; $t=2.72, p=0.004$). Over half the respondents at Coptic, Chogoria PCEA, Kikuyu PCEA, Maseno and Nazareth hospitals reported typical waits less than 30 minutes. Mbgathi Regional Hospital also received high marks for efficiency by clients, with eight of nine reporting typical waits of half an hour or less. There does not seem to be a correlation between wait time and presence of a nutritionist; wait time is determined more by patient load and staff organization. Presence of a nutritionist is more likely to affect quality of nutritional education and monitoring services.

A few patients reported long waiting times:

“We wait long because patients who come behind you are served first and we don’t know why that happens. You could even arrive here at 6:00am so that you are done early and continue with your day’s business, but you will end up leaving at 6:00pm and at times they are very slow when patients are not so many.”

(Female FBP client, Nyanza Province)

Some clients observed that on busy days, staff tended to be more efficient and work more quickly than on slower days:

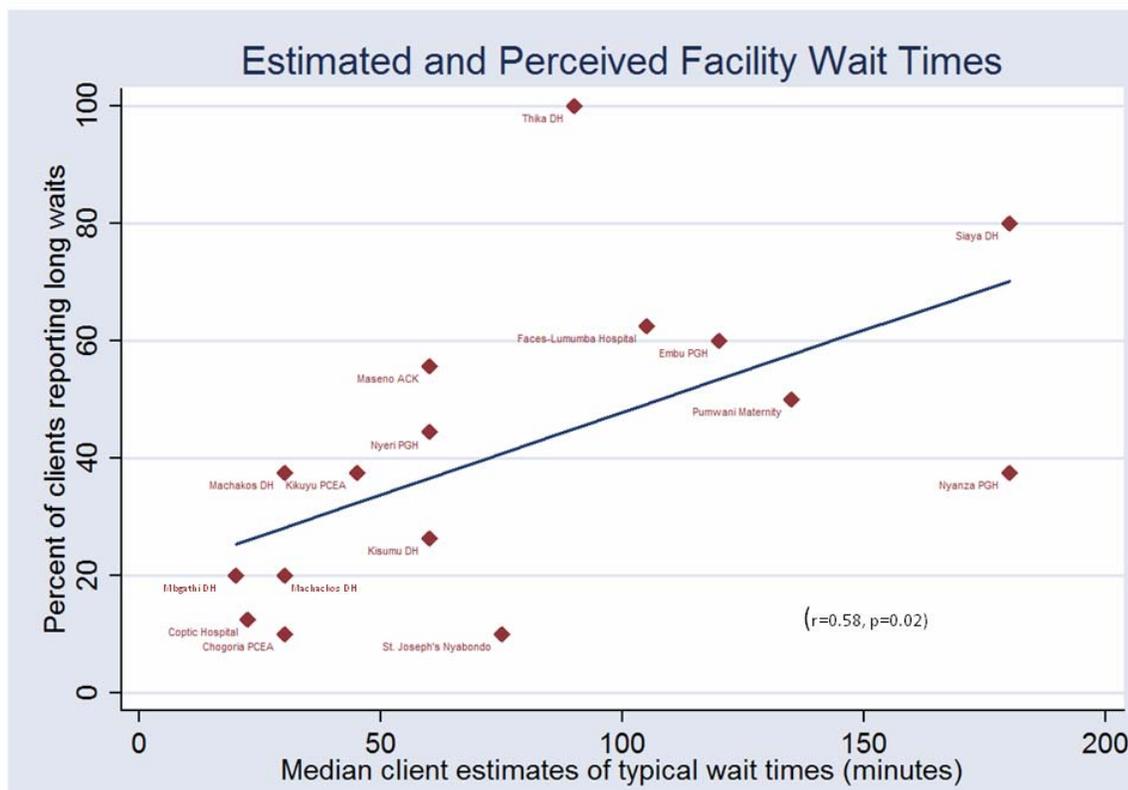
“I would rather come on a busy day because they work faster when there are more patients. I don’t understand why.”

(Female FBP client, Nyanza Province)

Respondents were also asked if they felt waits were “too long” or “reasonable,” and they were asked to estimate how long they routinely wait to be seen. There was no association between opinions of wait times and either age or sex of respondent. However, both the perception of waiting times and their average estimation differed among facilities (F=2.5, p=0.004). In most facilities, the majority of respondents felt that waits were reasonable, although in 6 of the 16 care and support sites, 50% or more of those responding reported that waits to see the provider were too long. Comparing facilities, the median time estimation correlated strongly and significantly with the proportion judging wait times to be unacceptably long (r=0.58, p<0.001; see Figure 1).

In aggregate, men and women perceive wait times and evaluate the adequacy of how quickly they are served in the same way. Noted variations here were by site rather than a reflection of the demographic or characteristics of clients.

Figure 1: Estimated and perceived facility wait times



Staff

In both FGDs and individual interviews, clients reported that they considered the providers highly knowledgeable, courteous and helpful. In most cases, they treat clients with dignity, respect and compassion. By and large, they were also considered fair, maintaining a “first come first serve” basis in service delivery (although there were some reported cases of favoritism). Clients appreciated that staff are kind and maintain confidentiality. Many staff members seem to go out of their way to ensure that the needs of the patients are met to the best of their abilities and available resources. For example, in Mbagathi clients reported that the CCC staff (nutritionists) helped weak clients carry the FBP commodities from the dispensing office to the client’s next appointment at the CCC. At Coptic Hospital, clients are able to reschedule their appointment if they are unable to come to the hospital. At Nyabondo, clients are given a cell phone number that they are able to call if they are feeling too ill to come to the hospital; a provider will conduct a home visit and bring them to the hospital on a motorbike if urgent care is required.

However, there was some criticism of staff at certain sites. A few isolated cases of negative staff attitude were reported in patient focus groups in Central and Nyanza provinces where some staff members were criticized for being discourteous, arrogant and rude. There were also some reports of favoritism on the queue. As one client claimed, *“The nurses serve the patients they are acquainted to first.”*

At some sites, clients were not confident about the competence of some staff. At one mission hospital, for example, clients reported that the appointment dates they are given do not accurately correspond with the quantity of medication/FBP dispensed; hence clients run out of products several days before their next appointment. Furthermore, at some rural satellite sites clients reported that they did not receive clear instructions on preparation and use of FBP commodities nor did they receive nutrition counseling, which resulted in inappropriate use of the commodities.

Most clients were satisfied with the amount of time they were able to spend with service providers, with 95.7% responding that their time with the doctor was enough, rather than too little. The amount of time spent with clinicians ranged, depending on whether it was a first time visit or a follow up, if the client was experiencing complications and also depending on the patient load and on the individual provider. One FGD participant described the providers:

“Some will rush you through because they have other businesses they want to attend to, others will take their time with you and enquire about your health in details. So it depends with whom you find.”

(Female FGD participant, Central Province)

Products

Clients were asked about their utilization of a number of care and support services, including medicines, psychosocial support and support groups. Nearly all of the sample respondents received some medication, and all but two reported receiving cotrimoxizole (generally known by the brand-name “Septrin”) as prophylaxis for opportunistic infections. Some 17% of respondents were likely pre-ART, although it is possible that some respondents misunderstood their medication status and responded negatively. Slightly over 25% were under treatment for tuberculosis, with almost the same percentage reporting use of additional antibiotics and antiparasitics (including anti-malarial drugs). Less than 20% were currently using an antifungal (usually fluconazole). Of those responding, a majority mentioned that they were taking vitamins or another dietary supplement.

In our sample, female respondents were more frequently pre-ART than men, a tendency that was marginally significant ($\chi^2=2.77$, $p=0.10$), but likely reflective of women’s greater utilization of care and support services during earlier disease staging. Men were also more frequently under treatment for tuberculosis than women (33% vs. 25%, ns). Similarly, men were significantly more likely to report use of additional antibiotics ($\chi^2=9.04$, $p=0.003$), suggesting a higher prevalence, and/or greater severity of opportunistic infections. However, antiparasitic use among men and women (25-30%) was similar, as was utilization of antifungal preparations.

Table 4: Care and support service utilization

Service Category/Variety	n	%^a
Receive Medications	138	99.3
Antiretroviral	110	82.7
Tuberculosis medication	36	27.3
Cotrimoxizole/Septtrin	130	98.5
Other antibiotic	34	25.8
Antiparasitic	35	26.5
Antifungal	25	18.9
Other reported medication ^b	92	-
Visit with medical provider	129	95.6
Psychological counseling (“feelings and emotions”)	112	86.2
Group counseling	91	75.2
Bringing a child in for care	41	42.7

^a Reported as percentage of valid responses, excluding missing or miscoded responses for item.

^b In all but two cases reporting multivitamin or other supplement; one reporting use of antiemetic, with another reporting meningitis treatment (not specifying antibiotic).

In terms of food products, almost all respondents found the food products very important to their lives, boosting their immunity and helping them gain weight. Furthermore, the FBP products were also associated with improvements in appetite, CD4 counts, and energy levels. A number believe that if it were not for the FBP program, they would have passed away. One female FGD participant reported: *“The flour is good because you regain your strength after a few days, your appetite improves and your CD4 count also increases.”* Post-partum mothers appreciated that the flour had helped them significantly during their pregnancy since it provided them the extra energy their bodies needed.

In analyzing the association between site and client reports of adherence to the amount of food prescribed by the provider, there seems to be a tendency for clients to consume more of the quantity recommended by the clinician. Over three-quarters of FBP clients interviewed consumed a single sachet of commodity daily, in line with package recommendations. However, nearly 20% of the respondents admitted that they utilize an amount of FBP commodity that is different than that recommended by the provider who dispensed it to them. Eighteen clients (about 13% of the total) reported that they deviate from the recommendation, consuming more than a single sachet daily, while seven reported using a single sachet or less per day. Over-consumption (>1 sachet per day)

was high and significantly associated with a respondent admitting or being aware of altering their consumption from recommended levels ($\chi^2=47.6$, $p<0.001$).

There is no significant difference by gender in reports on the regular availability of the FBP commodity. Nor does gender of respondent demonstrate any association with non-adherence to a recommended FBP regimen.

More than half of respondents in two facilities reported altering their consumption from the recommended quantity with lower proportions in other sites. Explanations by respondents indicate that the main reasons for overconsumption included: 1) sharing with children and/or other family members; 2) needing or wanting to eat more (perhaps due to using the flour as a primary, rather than supplementary, source of food). There were also nine respondents who consumed two or more sachets and asserted that it was within prescribed limits. The few respondents eating less than prescribed suggested that the commodity made them feel uncomfortably full, or that they wanted to conserve their supply of food over time.

Most clients found that the product took a relatively short time to cook and they liked the taste. Some clients reported difficulty in preparation (unlike *ugali*, which is prepared using hot water, the FBF should be mixed with cold water and then heated to avoid lumps), but after instructions and cooking demonstrations they were able to prepare it correctly.

Some clients did complain about the taste or consistency, but most got used to it and found it acceptable. Only a couple clients reported that they stopped taking the flour after experiencing diarrhea. There were isolated cases where the beneficiaries reported that they had not gained any weight. However, these cases of reduced or constant weight were attributed to poor adherence to the FBP protocol.

It emerged that the safe water solution was not being dispensed alongside the flour at a number of facilities. It could be that service providers do not understand the criteria for provision of WaterGuard or do not consider it a critical component of the nutritional package. It seemed that a number of patients had not been well counseled on point-of-use water treatment and/or did not appreciate the WaterGuard as much as the flour. Some view the WaterGuard as an “extra” and not as important. At Embu and Thika sites for example, more than half of the focus group participants who received flour indicated that they did not receive the water purification commodities.

Education and counseling

There seemed to be a range of client perceptions of the counseling and education they received. Both FGD and exit interview data show that clients consider the education and counseling given at facilities very important and useful. Clients reported that they learned how to eat a well-balanced diet consisting of locally available foods. They were also counseled and educated on positive living, drug adherence and hygiene.

Proportionally more men than women reported that they received “[c]ounseling with a specialist about [their] feelings and emotional health” (91% vs. 84%, ns), although the prevalence of both men and women attending counseling groups was the same (75%). Not surprisingly, women more frequently reported bringing a child to the clinic for treatment than men ($\chi^2=6.3$, $p=0.01$). There was also a marginally significant tendency for women to rate the importance of care and support services more highly than men ($\chi^2=3.80$, $p=0.052$; 96% vs. 87% evaluating services as “very important”).

In addition to the clinician-provided education and counseling, exit interviews showed that clients also like the education and counseling received through support groups, which are available at most,

but not all, sites. In these groups, clients receive good advice and counseling from peers which enables them live positively. As one client observed, “*the support group has enabled me realize that I’m not the only one infected and has enabled my health to rebound due to adherence and attendance at the clinic.*” Support groups were found to be particularly strong in Kisumu, Nyabondo and Faces and were a very good source of psychosocial support for clients.

Although clients appreciate nutrition counseling and education, it was reported to be weak in many facilities visited and these services were not always offered regularly. Nutrition education was given during the initial adherence counseling before clients were enrolled into the ART program. However, this nutrition information is given alongside a lot of other information, and some of it is not absorbed by clients. Once a patient is enrolled, counseling is rarely provided, except as part of group health education sessions.

Table 5: Perceived importance of care and support services

Service	Men		Women	
	<i>Somewhat important n (%)</i>	<i>Very important n (%)</i>	<i>Somewhat important n (%)</i>	<i>Very important n (%)</i>
How important are the medicines you receive at the clinic?	5 (13.2)	33 (86.8)	4 (4.0)	96 (96.0) ^a
How important are the vitamins you receive at the clinic?	4 (12.9)	27 (87.1)	5 (5.6)	84 (94.4)
How important is the food you receive at the clinic?	2 (6.5)	29 (93.5)	2 (2.4)	83 (97.6)
How important is the nutrition counseling and education you receive?	6 (17.1)	29 (82.9)	3 (3.0)	96 (97.0) ^b

^a $\chi^2=3.8, p=0.052$

^b $\chi^2=8.2, p=0.004$

Notes:

1) In general, exceptionally high value is placed on care and support services. More than 90% of respondents reported that flour distributions, nutrition counseling, medicines and vitamins were “very important” to them. Safe water counseling and provision of water purification supplies had lower proportions of maximum valuations (88%), with a few respondents reporting that these services were unimportant to them (possibly reflecting that they did sometimes did not receive WaterGuard).

2) Client perceptions show some variation by gender. There was a marginally significant tendency for women to rate the importance of medicines more highly ($\chi^2=3.80, p=0.052$; 96% vs. 87% evaluating services as “very important”). Vitamins were also more important to women, but not significantly so. Food was considered very important by nearly all men and women, with no appreciable difference. However women had significantly greater appreciation for nutrition counseling and education ($\chi^2=8.2, p=0.004$; 97% vs. 83%).

CLIENT-IDENTIFIED CHALLENGES

Most of the challenges identified by clients were associated with difficulties in traveling to the clinic, time waiting at the clinic, time spent with providers, preparation of the *uji* and sharing of the product. Challenges include:

- Food insecurity and poverty inhibiting consumption of proper and adequate nutrition at home. Most clients report that they and their families are not able to eat a well-balanced diet and sometimes rely solely on the FBF, even though they understand it is designed to supplement their household meals. This often results in sharing of the product with family members, so that the product runs out before the client's next visit.
- The FBP entry criteria is directed at the treatment of malnutrition but not its prevention, so that one's nutritional status must dip low before s/he is eligible (i.e. BMI < 18.5 kg/m² for adults).
- Traveling can present a challenge when a client has to prepare *uji* outside of the home. In some cases (e.g. work, visiting in-laws), clients leave the flour at home and do not consume it during their travels. It is also stressful for clients when visitors come to their home and they feel like they must share it, out of hospitality obligations, or hide it, out of fear of stigma.
- Food preparation remains a challenge. This could reflect the quality of the instruction, capacity of client to prepare the food, or a combination thereof.
- Cost and time required to travel to the facility is a constraint to some clients at times.
- In some facilities, there is a shortage of clinicians and an overburden in terms of number of patients, resulting in longer waiting times for clinical evaluation/services.
- At some sites, poor coordination and communication among staff leads to confusion and poor service delivery.
- Stock outs have been a problem, with clients unable to access food when they are supposed to, or not having the appropriate type of product on hand.

CLIENT RECOMMENDATIONS

Many client recommendations revolved around expanding the entry and graduation criteria so that clients can remain within the program for a longer period of time. They also requested that the program be extended beyond flour supplementation to include household food baskets and livelihood support. Other suggestions provide promising ideas for operational improvements. Such recommendations include:

- Nutrition education and counseling should be provided on a more regular basis, not just at enrollment visit and on ad hoc basis. Clients are looking for clear, specific, actionable counseling at each visit. Recognizing that clinicians have limited time, volunteers could be trained to provide education and counseling as well.
- Additional health providers should be trained and posted in order to improve FBP service delivery, and staff should demonstrate an encouraging attitude towards clients.

- PLHIV health workers should be employed by the CCC, as they will better understand client needs. Also, PLHIV clients could be engaged as peer educators and volunteers.
- FBP services should be expanded so that they can be provided closer to clients' homes and some services should be decentralized in order to reduce waiting time.
- Additional support (transport, training, etc.) should be provided to Community Health Workers (CHWs) to make their work easier and more efficient.
- CCCs should link clients with livelihood opportunities and assist clients to start income generating activities so that they can improve their household food security.
- FBP products should be made widely available at commercial centers in order to improve access and reduce stigma.

As might be anticipated, some patient suggestions to multiply the quantity and breadth of services expand beyond the scope and objectives of the FBP program:

- Food support should go beyond supplementation and should include foodstuff such as soybeans, vegetables, cooking oil, maize etc.
- The admission and graduation criteria should be more flexible so that clinicians should not wait until client has a low enough BMI before enrolling them in the program. Furthermore, just as ART is for life, so should food support be continued.
- The FBP program should be expanded to support clients' family members through a household ration.

CLINICAL PROCESSES AND PROVIDER PERCEPTIONS

The interviews with providers, in combination with assessment team observations, yielded insights into clinical processes at the facilities in terms of patient load management, tools for implementation, and record keeping and reporting. Furthermore, providers shared their observations on the benefits and challenges of the program.

PROVIDER-NOTED BENEFITS

In general, providers at the sites visited provided very positive feedback about FBP:

- FBP improves clinical outcomes in patients and interventions to improve nutritional status seem to enhance the efficacy of ART.
- FBP improves adherence to ART since the *uji* buffers side-effects of the ARVs and relieves the hunger that sometimes accompanies ART.
- FBP may extend pre-ART period, because treating malnutrition in HIV-infected adults and supporting them to sustain healthy nutritional status could contribute to delaying ART initiation. More research is required in this area.

Furthermore, providers felt that FBP fosters better understanding of the role of nutrition and nutritionists. Nutritionists in particular were very positive about a new-found respect for their clinical role and an elevation in their professional status. A number of nutritionists shared their sense of satisfaction and pride in contributing to patient well-being. One nutritionist commented, “*Finally we have something to offer*” [in addition to the nutritional counseling]; she had felt frustrated knowing patients were not able to access the recommended high-energy and nutrient-rich foods.

Management of client load

Patient flow tends to be well organized in the CCC, although, as noted above by clients, efficiency varies from place to place. In particularly well-functioning facilities, all patients are seen by a nutritionist, the referral system is well-coordinated, health professionals in the CCC share information in a timely, consistent manner and are well-informed of each other’s activities. A number of facilities designate one day of the week for staff meetings, during which the CCC team reviews and discusses each patient’s file to foster coordination between the cadres and optimize integration of care. Above all, the in-charge is conversant with the FBP protocol and is engaged in the management of the program. In some of the less integrated facilities, however, different departments are only concerned with their immediate responsibilities and do not share information, follow up on referrals or engage with other departments’ activities.

At some sites, the nutritionist is the first-stop for patients—s/he takes all weight, height and arm-circumference measurements before the client moves on to other providers in the clinic. At others, nurses take weight, height and vital signs at a triage station and refer patients as needed; the patient might be referred to the nutritionist (if one is present) directly from triage or after a visit with the medical/clinical officer.

Task shifting is practiced in most of the facilities in Nyanza, Nairobi, and parts of Central and Eastern. At many of the sites visited in Nyanza, there is not a nutritionist designated at the CCC to manage FBP. Even at facilities where there is a nutritionist, s/he often trains other colleagues (i.e. nurses) or volunteers (i.e. recent graduates or former clients) to help implement the FBP (i.e. taking measurements, filling forms, dispensing product). At Mbagathi Hospital, all nutritionists in the hospital rotate through the various departments so that all nutritionists on staff are trained and competent in managing the FBP program. In Central and Eastern sites where there is a designated nutritionist, nurses occasionally dispense and prescribe FBP products.

In terms of wait time, clinical professionals’ estimates of waiting times were half to a quarter of patients’ estimates. In all cases, mornings are busiest. Clinics adopted different means for dealing with their morning rush of patients. In Chogoria, there is a structured process which uses a 45-day computer-generated projection of patient flow based on appointment schedules. At Nyabondo, clients enter different triage rooms depending on whether their visit is first-time or follow-up. In a number of facilities, staff or volunteers give informal health talks while clients wait. Furthermore, facilities try to schedule particular days of the week to serve specific populations, such as infants or adolescences, in order to more effectively cater to the particular needs of these groups.

Resources for implementation

Most of the facilities visited are well established and well run and seem to have adequate resources for FBP implementation. ART and HIV-related drugs are available and dispensed free of charge. However, medicines for some non-infectious chronic conditions such as diabetes and hypertension, or laboratory procedures such as STI testing often have a fee.

There is substantial variation between sites in terms of clinical and storage space. In general, most sites have at least one consultation area dedicated for nutrition counseling and staff makes an effort to protect patient privacy during consultations. While some clinics have consultation rooms with doors to provide a degree of privacy, others have a shortage of space, leading to consultations punctuated by occasional interruptions.

All FBP sites are supposed to have a designated storage area, and most do, with varying degrees of appropriateness, adequacy and proximity to services. In some sites, such as Nyabondo, product is kept in a storage area in other part of the health facility and the nurse walks over with a group of eligible clients to dispense the product. In Siaya, product is kept in a separate storage area and a week's supply is transferred to the counseling area where it is dispensed to clients. Nyanza PGH has a separate wing dedicated to the CCC, with a room for counseling, a room for support group meetings, two other rooms for clinicians, and a stand-alone trailer outside in which the flour is stored. In Nyeri, the lead nutritionist felt that storing the product in the same area where counseling is conducted is problematic for patients who are not eligible to receive it and may feel resentful.

There is also variation in terms of quality and quantity of anthropometric equipment. While all sites had at least some weight and measuring devices, some had high quality, functioning stadiometers, adult and infant scales, and MUAC tapes for adults and children, whereas at other sites, equipment is older, broken or missing. A few sites improvised height measures by drawing measurements on the wall. In general, most sites lack MUAC tapes for children and there are not as many infant scales as adult scales available. Despite the range in quality and availability of tools, all sites visited are conducting anthropometric assessments and utilizing the job aids (BMI charts), which tend to be hanging on counseling area walls.

It should be noted that FBP does not appear in most the facilities work plan, nor is there a budget for it. Most administrators view FBP as an outside-funded project and expect the donors to meet the costs.

Record keeping and reporting

Recording and reporting has been standardized across the FBP program, with monthly reporting to AED in Nairobi. The prescription books with patient records are available across all sites, and staff makes an effort to include a copy of the form within patient files. At least one copy of the patient form is supposed to remain in the facility while another one is kept by patient to assist during subsequent visits. However, in the public hospitals, CCCs use a card that the patient carried from station to station, and anthropometric measures and notes on program eligibility might be entered on that card more frequently. Ideally, cards would remain with patient files. However, it is not clear whether anthropometric information is consistently integrated with patient files.

Although staff appreciates the need for data entry and reporting, many complained about the new FBP reporting tools, expressing that they are tedious, time-consuming, and created a burden. Furthermore, they expressed that the paperwork is bulky to store and difficult to utilize for performance management or decision making. Furthermore, while staff may have received training in filling out the forms and reporting some have left or shifted tasks to others who have not been adequately trained.

Some facilities are beginning to introduce computers and electronic data capture processes. At Siaya, CDC is piloting a data reconstruction and data entry activity whereby health data from patient blue cards are being entered into an Access database called C-Pad (designed by ICAP). Once completed, the system will be used to track defaulters, capture referrals and transfers, and synthesize visit

information. The database is currently capturing patient weight from each visit, but BMI is not calculated and there is no reference to whether or not the patient is enrolled in FBP. At Nyabondo, CRS has donated three computers and AIDSRelief provided a software called IQCare (International Quality Care) which captures patient data and runs reports for NASCOP, AIDSRelief, Clinton Foundation, and the District DHRIO. The patient home page presents summary information about CD4 count over time and weight and BMI over time. Although FBP reporting is not currently included in the system, the implementing partner (Constella Futures) could insert a field to integrate FBP in the data collection and reporting, as they had done for TB data. FACES Lumumba is piloting an M&E FBP database in Kisumu. The Access database was designed to mirror the AED paper data collection tools. Currently, the database is only being used to capture data; reports are not yet being generated. Currently, the system is not calculating actual BMI (it just indicates range). However, since the tool does collect weight and height, the database could be programmed to calculate BMI automatically. This could be useful collect data on actual change in patient BMI during participation in program (BMI could be captured at point of entry, midway and exit).

PROVIDER-IDENTIFIED CHALLENGES

Providers also identified challenges, including widespread household food insecurity, difficulty in managing borderline cases and increased work load burden. Some challenges are specific to the FBP program and the clinical settings in which they work to while others are beyond the control of providers or medical systems:

- **Relapsing clients re-entering the program:** Providers are observing that a number of clients who have graduated from the program once they attain BMI ≥ 20 soon after return to the facility malnourished again, having been unable to access sufficient nutritious food to maintain their body weight, and re-enter FBP. Although there is not currently a mechanism for capturing data on the number and percentage of graduated clients who re-enter FBP, this is an important trend.
- **Sharing of product among household members:** Across the range of Kenyan ethnicities, norms about family food sharing and hospitality toward guests make sharing almost mandatory. Although providers counsel clients that the flour is prescribed in a specific quantity intended for their exclusive consumption, sharing of FBP products is still common practice. There were a couple reported cases in which, out of frustration, providers have told mothers that the *uji* is harmful for children in order to stop them from sharing it. It should be noted that intra-household sharing seems to be the major source of program leakage and diversion of flour (i.e. for sale) is rare.
- **Frustration of HIV-negative patients unable to access FBP:** Some clients who are not HIV infected feel “left out” of the program and may be motivated to get infected in order to access the nutritional services. One HIV-infected mother was reportedly “disappointed” when her third child was born negative, since she would not be eligible for nutrition support. Furthermore, some providers felt FBP should be extended to patients who are underweight and HIV-negative but suffering from other illnesses that compromise their immune systems. [It should be noted that all HIV-exposed children are eligible for FBP from weaning to 24 months, and thereafter if there is evidence of growth faltering (< -1.5 z-score); they do not have to be HIV-infected.]

- **Need to continually explain eligibility and graduation criteria:** Providers constantly have to explain entry criteria to clients who feel they are entitled to receive FBP products but, according to program criteria, are ineligible. Similarly, some patients who gain weight and graduate from the program resist leaving the program, claiming they are being “chased away.” Some patients argue that if ART is for life, so should be the nutritional supplementation. Patient education is an ongoing responsibility that can occupy a great deal of time and be stressful for providers.
- **Medical and ethical challenges in “borderline” cases:** In some cases where patients show clinical signs of nutritional compromise, and/or may demonstrate economic hardship and household food insecurity, yet fail meet the anthropometric cutoffs for program eligibility, clinicians feel hamstrung by strict anthropometric criteria. They know that patients are becoming clinically malnourished yet are unable to prevent this decline.
- **Stock outs disrupt FBP uptake and patient flow:** Sites throughout the country reported a stock-out of product during July-August, which disrupted new enrollments and created a loss of current patients. Clients became frustrated when they reached the facility and found no product, and providers felt under pressure to provide explanations and assuage patients. [The stock outs were due to supply issues and were not related to problems with re-ordering or inventory management.]
- **Overload of patients at FBP sites:** Clients are attracted to the food products and may leave their original facility and travel to the FBP facility in order to access the services there. This can cause an influx of patients at one site, resulting in longer wait times and overworked staff, while enrollment decreases at other sites.
- **“Double-counting” of enrollments and interruption in treatment:** Another implication of clients switching sites is that they may enroll at the FBP site as a new patient (rather than a transferring one). The first facility would count the client as a defaulter while the second would count the same person at a new patient, resulting in double counting at the provincial and national levels. Furthermore, there is risk of interruption of treatment if patients do not disclose complete information about their medical history. This was not a widely-reported occurrence, but is noted as a risk.
- **Constraints related to paper-based data collection:** Since data collection and reporting is paper based, data storage and retrieval is difficult and data cannot be used effectively for improvement at the facility level. A lack of computers undermines data capture and reporting. Furthermore, changes in the forms can create confusion and inconsistency.

DIMENSIONS OF TRAINING AND SUPERVISION

TRAINING

Most of the FBP trainings have been coordinated by NASCOP in collaboration with AED and Insta Products. They largely consisted of short courses lasting four days and targeted health providers, among them nutritionists, clinicians and nurses. In general, hospital administrators and the social workers were not trained. Although not originally included in the formal training modules, Training of Trainers (TOTs) have been conducted, intended to decentralize training and also enhance the pool of knowledge. Trainings conducted include:

- **Jan 2006:** Insta provided training to health care workers from selected sites in Nyanza, Coast and Nairobi (mix of private, government, and OVC/pediatric-focused facilities).
- **Oct 2006:** Insta conducted second training, both as a refresher and supporting scale-up
- **July 2007:** Insta conducted a one-day sensitization training, focused on FBP implementation, including modules on general nutrition, interactions between HIV and nutrition, utilization of commodities to address malnutrition, taking anthropometric measurements and enrolling/discharging clients.
- **Oct 2008:** AED conducted a two-day training of provincial nutrition officers (PNOs under MMS)
- **Oct-Dec 2008:** AED conducted series of three-day regional trainings for health workers focused on: nutritional counseling, treatment of SAM, M&E and community linkages.
- **June 2009:** AED conducted two-day training with 16 additional PNOs and PCNOs (under MPHS and MOPHS respectively).
- **July 2009:** AED conducted five-day training for 40 health workers at new sites
- **October 2009:** Planned training for 20 new sites as part of the second phase of scale up.

At least one provider in all the facilities visited had received training from AED and/or NASCOP. However, at some sites, the person who had been trained left the facility. High job mobility, especially among nutritionists, frequent transfers of both nutritionists and other health workers, and the split of the Ministry of Health into Ministry of Medical Services and Ministry of Public Health all pose challenges to retention of trained staff.

Many of the facilities have responded to this problem by engaging the services of volunteer nutritionists or health assistants who are trained on the job. However, on-the-job training is reported to be slow and strenuous due to large workloads. One nutritionist complained that she, “*bad no time to train new recruits or attachés*” even though she recognized that the new recruit could help lighten her workload. Most of the volunteers are students pursuing their courses in local middle level colleges

and universities. Some are graduated clients of the FBP program who had demonstrated their skills at peer counseling or record keeping.

The trained nutritionist or other health professional in the CCC is expected to train other staff in the facilities via Continuing Medical Education (CME) and mentorship. However, there has not been follow up on CMEs to ensure quality, depth and frequency.

JOB AIDS

There are job aids available in all the sites visited. It was encouraging to note that the job aids—including the posters of BMI cut off for adults and children, the FBP protocol, and nutrition teaching posters—are appropriately displayed in the sites visited. Some sites also have the counseling cards on the desk where they provide counseling. Observation revealed that most of the tools are being used. The job aids are particularly useful to the volunteers and new staff who had not received formal training on FBP.

The idea of availing job aids was strongly commended in all policy interviews. Frequent supervision is required to ensure that the most up-to-date versions of the documents are available at the facilities and are used regularly.

SUPPORTIVE SUPERVISION AND PERFORMANCE MANAGEMENT

Supervision tends to be conducted by the CCC in-charge. In sites with multiple nutritionists, a lead nutritionist provides a supervisory role. Most sites have some form of supportive supervision. Med Sups may be briefed weekly on the activities of the nutritionists (including FBP) along with other activities at the hospital. At some hospitals there is strong supervisory support and nutritionists feel empowered to managed their departments and report any problems that they cannot handle to the hospital administration.

At other facilities, however, the administration does not seem to provide strong support to the nutritionists and sometimes the FBP program is left to the nutritionist to manage without supervision from the head of the facility.

In some provinces, there seemed to be a weak link between facility nutritionists, DNOs and PNOs. In Nairobi province, the DNO provided more supervisory support than the PNO or the national nutrition office. In Central Province, the PNO was new and serving in an acting capacity. The PNO in Nyanza province was extremely engaged and active, working to arrange coordination meetings. The current reporting structure may be adversely affecting supervision, as DNOs and PNOs are not fully engaged in reporting and feedback.

Furthermore, none of the facilities visited used M&E for performance management. They tend to send their monthly reports to AED without utilizing them for program analysis or as a benchmark to evaluate staff performance. At some sites, there is a facility-based appraisal mechanism and overall QI performance monitors do exist, but they are not focused on FBP.

There appears to be little supportive supervision of satellite and community workers by the CCC. One exception is Nyabondo, where 76 community health workers have been trained, and annual refresher trainings are provided. In addition to their initial two-week training, they have a one-week attachment at the CCC, shadowing the nurses, to better understand the services offered there. The CHWs complete forms detailing the services they provide to clients; the forms are then added to the client file at the facility and the CHW receives feedback, based on information in the forms. A nurse

from the CCC regularly travels out to communities to supervise the CHWs and help facilitate support group discussions.

ELEMENTS OF INTEGRATION

Integration of the FBP program with other elements of HIV care, treatment and support is critical. Integration requires a robust referral process, incorporation into ongoing staff responsibilities, strong community linkages, combined storage and distribution with other health commodities, and inclusion into ART monitoring and evaluation processes. A failure to effectively integrate FBP into care and treatment may create stove piping of services and information, resulting in inefficiencies and lack of sustainability.

REFERRAL OF CLIENTS

Within the CCCs, the referral system seems to be strong in most of the sites visited, reflecting close interactions between clinicians. For the most part, clear procedures are in place to guide client movement between stations. Some facilities use referral forms between CCC department/sections. In others, although there may be one or two focal point(s) for FBP at a CCC, the other clinicians (nurses, clinical officers) are usually conversant with FBP and cognizant of which patients are enrolled in the program. At some facilities, nutritionists are the first stop, at which point clients receive nutritional assessment and are enrolled in FBP, if required. Where nurses conduct triage, they indicate in the patient's file whether the patient should be referred for nutritional assessment for FBP.

At some other facilities, however, communication does not always flow so smoothly, resulting in weight measurements being taken multiple times or some eligible clients falling through the cracks. There were some reported instances of potential clients not being referred to the nutritionist from triage or the medical officer.

At Pumwani, FBP distribution is managed in the ANC. Although assessment of infected women at the ANC captures all eligible PMTCT women, referrals from the CCC required staff from the HIV clinic to walk an eligible patient to the nutritionists located in the ANC and the physical separation results in some eligible clients not enrolling. Overall, however, missed opportunities for FBP uptake tend to be rare; between 20-50% of new FBP patients per month come from the CCC.

There is potential for lost referral opportunities when a patient moves from one section of the hospital to another (i.e. from ANC/PMTCT or TB or in-patient care to the CCC).

STAFF RESPONSIBILITIES/TASK SHIFTING

Hospitals that did not have nutritionists attached to the CCC reported high levels of task shifting. At sites that do not have a nutritionist, a specific designate is capable of managing the FBP program, especially if s/he has appropriate training and resources and the CCC coordinator/hospital administrator clarifies roles and responsibilities and empowers the FBP coordinator. However, where the nurses or other cadres who are given FBP responsibilities are not adequately trained on FBP protocols and administration or lack assessment or counseling tools or do not have the time or authority, task shifting is not effective and some eligible clients may not get enrolled properly. This was particularly evident at satellite sites.

As part of FBP training, nutritionists or responsible cadre are instructed to conduct CMEs in order to inform and engage their colleagues in the program and develop a back-up network of support to fill in for them if they are on leave or transfer. However, it seems that these CMEs are not occurring on a routine basis.

At the sites where there is a nutritionist focal point for FBP, it seems that the FBP program is well integrated into ongoing staff responsibilities and nurses, doctors/clinicians, hospital administration, peer counselors, social workers and nutritionists are all engaged in the FBP program, and nutritionists are well integrated into the CCC team.

COMMUNITY LINKAGES

Community linkages play an important role in health care management and promotion, particularly in the management of chronic illnesses such as HIV and TB. They are quite significant for the FBP program, which operates within the broader context of widespread household food insecurity in Kenya.

In general, community linkages between facility based FBP programs and community efforts are weak, if they exist at all. At some facilities, the main focus of community linkages is on general care and support to HIV infected and affected individuals (including OVCs) and not on nutrition support. In fact most facilities do not have information about any food security or nutrition services available in the community. In other cases, partners are implementing food security and/or nutritional support projects in the area however the eligibility criteria do not align with the profile of FBP clients, or they are targeted at a particular segment of the population. For example, CARE Kenya's PMTCT nutritional support project in Siaya integrates a nutrition component into PMTCT at 21 sites that are not receiving FBP. It emphasizes exclusive breastfeeding for the first six months and then provides supplementary feeding support for infants older than six months who are no longer breastfeeding.

In Central and Eastern provinces, results of the client interviews showed that 59% of clients did not know of any available food and nutrition services in the community; in Nairobi and Nyanza this percentage was more than 70%. Referral to community services by clinical staff was even worse across regions, with 73% in Eastern and Central, and close to 95% in Nairobi and Nyanza/Western having no referrals to community assistance by social workers or other clinical staff.

While most facilities do not have strong linkages with outside community services, there are some that do, such as Nazareth and Kikuyu PCA. Most of the provincial and district facilities with rural catchments have satellites that offer a range of services, and hold clinic days that allow for referring patients in to the clinic. Along with outreach, CCCs have implemented internal counseling opportunities. For example in Nyanza PGH, Nyeri PGH, Kisumu DH and FACES, there are patient support groups and children clubs where the parents/guardians of children living with HIV and adults meet once a month to discuss issues such as adherence, income generation and disclosure. In Maseno MH, Siaya DH and Nyabondo MH, in addition to support groups and children's clubs, trained PLHIVs provide community outreach counseling on adherence, disclosure, stigma, psychosocial support, hygiene, nutrition and self-reliance.

One of the strongest community outreach models was at Nyabondo, where health providers make scheduled visits to households and facilitate support group discussions. The community outreach team is made up of 3 community nurses, 1 social worker, and 76 trained CHWs. Each month, the nurses develop a list priority patients for home visits (prioritization given to clients who are newly initiated on ART, have adherence issues, have low CD4 count or are very sick and/or enrolled in a

HBC program). During home visits, CHWs review a check list, including food security questions about a client's access to food, diet, water source, and economic status. If a client is deemed to be food insecure, a social worker will conduct an assessment of assets to determine if s/he is eligible to receive livelihood support. In partnership with AMREF's "Manish" program to address food insecurity, the CCC dispensed seed and fertilizer to eligible clients, who, after harvest, gave back two kg of their yield back to the facility.

Nonetheless, the strength of community linkages tends to be low and can be built up through hospital linkages via satellite clinics as well as mapping of and communication with community-based resources in food and nutrition. Strengthening linkages between FBP and community services can improve identification of eligible clients, client follow-up and referrals, as well as support graduated clients to maintain healthy nutritional status.

STORAGE AND DISPENSING OF FBP PRODUCTS

Storage is a topic of concern among providers. Some program managers expressed challenges in securing adequate storage space for the products. Most of the storage spaces visited was adequate, though not ideal, and there was a variation in the conditions. At best, the flour is neatly stacked on pallets, organized by product type, in a locked, well-ventilated room, free from leaks and rodents. The FBP coordinator manages the inventory to ensure "first expiry first out" and to avoid expiry or wastage. However, due to lack of resources in some facilities the flour is not stored in ideal conditions; it may get spoiled by wetness or rodents or the stock levels are not accurately known. For the most part, however, wastage and expiry are minimal and there were no reported cases of diversion from the clinic stores.

In most facilities, the flours are stored separately from other health commodities. In some facilities, the safe water solution is also stored separately from other health commodities, whereas in others it is stored in the pharmacy. Due to its bulk, a number of sites store the flour in a separate storage area and transfer a week's supply to the area from which it is dispensed. At some facilities, products are dispensed from the nutrition office while at other facilities they are dispensed from the pharmacy within the CCC. Unlike other medical supplies, the distribution and storage are in the hands of the prescribing officer: In all but one facility (i.e. Maseno MH where a pharmacist manages dispensing) management of the FBP products is under the supervision of the nutritionist or FBP focal point rather than the pharmacist or store person.

Client interviews revealed that patients felt that distribution of FBP commodities is well integrated with other services. For instance, most clients are able to collect FBP commodities on the same day and time as they receive their ARVs and other medicines. The results of the client interviews indicate that 72.4% received food and nutrition services on the same day they received their medicines, with 27.6% indicating that they received them on separate days. If clients did have to return on separate days, it was because: the appointments for each service were on different days; or they were told to buy medicines, which they could not on the same day due to lack of money; or they made unscheduled visits to address complications; or their next appointments for clinical care and services were longer than the standard one month to receive flour. In almost all cases, clients received food and nutrition counseling on the same day they received other counseling services.

DATA COLLECTION AND REPORTING

As noted earlier, there is potential to improve integration of FBP data collection and reporting with other existing mechanisms. Currently, AED-produced reporting forms for patients and stock

management are available and in use in all facilities. However, these forms are completed by the nutritionist or FBP coordinator, separately from other forms at the CCC, and are sent monthly directly to AED in Nairobi, bypassing the district and provincial reporting structures. Thus it is not currently possible for DNOs and PNOs to have insight into specific FBP activities or provide supervisory feedback to the facilities.

On the FBP reporting tools there is provision for entry of client ARV related information. However, these tools are not integrated in the overall CCC monitoring and evaluation of ART and other care and support services. A synthesized report that incorporates FBP into ART reporting would enhance the integration of FBP into care and treatment. As the reporting mechanism now stands, there are parallel reporting structures that do not effectively inform one another.

RECOMMENDATIONS FOR KENYA PROGRAM

Overall, the Food by Prescription program in Kenya is an excellent intervention, well-appreciated by clients and providers alike in terms of improving nutritional status and health outcomes and supporting adherence to and efficacy of ART. There were a few specific suggestions which were identified that AED could address during this replication phase:

- Make product available for purchase by the general population in the public sector (i.e. grocery stores) in order to address issues of stigma and difficulty carrying or accessing the product while traveling. [Insta has initiated a business plan for commercial sales of their product.]
- Provide more specific storage guidelines and provide technical assistance in order to meet minimum storage and handling requirements.
- Improve integration of safe water solution into counseling and product dispensing by strengthening training and providing feedback on reports to help ensure that patients are given WaterGuard in a consistent manner.

Furthermore, this assessment identified six critical areas for quality improvement in order to facilitate graduation from the program, reduce re-entry, enhance integration and encourage sustainability. These areas involve: training, supervision, referrals, community linkages, reporting and data management, and policy.

TRAINING

- **Strengthen nutritional assessment, counseling and education at the facility level:** Nutritional assessment and counseling and education on FBP compliance and maintaining a balanced diet are essential for patient graduation and avoidance of re-entry. Training thus far has included provision of nutrition counseling and education however this counseling has been identified as weak. Some clients felt that education was not thorough enough and was not provided on an ongoing basis. Furthermore, through task shifting, some volunteers are assuming assessment and counseling responsibilities but they might not have received adequate training to record and provide information accurately and effectively. Therefore, in addition to ongoing training for FBP providers, TOTs and CMEs should be standardized and follow up should be conducted to ensure the quality of assessment, counseling and education. Training should also be provided on both one-on-one counseling and group counseling.
[AED, NASCOP]

- **Ensure counseling and education materials are up-to-date and consistent:** It was observed that some sites were using older versions of materials. Providers should have access to updated protocols and counseling tools and be trained in the differences of updated versions. Furthermore, providers should also be trained on the other nutrition interventions provided at their facility, such as the guidelines on and treatment of severe acute malnutrition (SAM), so that they better understand how interventions interconnect and can provide accurate information to clients. To that end, training materials on HIV/AIDS and management of malnutrition should be harmonized.
[AED, NASCOP]
- **Design training based on ongoing QI implementation at facilities:** Rationalize training to take into consideration QI efforts, supervisory feedback, and task shifting. Trainings should be revised to reflect the changing needs of staff and organizational structure in an effort to promote efficiency, efficacy and sustainability.
- **Improve targeting of trainees:** In addition to nutritionists and other health professionals, other actors are also engaged in FBP implementation. Training should also be targeted at volunteers, social workers and community health workers who are working on FBP, both within the facilities and in the communities.
[AED, NASCOP]
- **Include pre-service training (PST) on nutrition and HIV for health care workers, including clinical officers, nurses and social workers:** By sensitizing other health cadres to the interactions between malnutrition and HIV/AIDS, bolstering appreciation for the role of nutrition, and supporting integration, PST could expand the cadre of health workers engaged in FBP.
[Relevant ministries and university institutions, NASCOP]
- **Provide for regular refresher trainings in nutrition and HIV and FBP for implementing personnel:** Resources should be included in the facility work plan and budget, and should also include clinical mentorship.
[GoK/MoH, Partners]
- **Provide training in data management:** In order to improve data collection, record keeping and reporting, additional training should be provided on data management. Such training should go beyond stock numbers to equip staff with the tools and capacity to analyze data for performance management. Additional tools (e.g. computers) may be required.
[NASCOP, Partners such as ICAP, Constella Futures, AIDSRelief]

SUPERVISION

- **Target FBP during supervisory visits:** Most facilities have an ongoing supervisory support mechanism. Supervision should be a continuous process and outcomes should be used for quality improvement and staff appraisals. Evaluation of FBP services should be incorporated into the supervisory checklist, and mentoring on provision of FBP services should be provided as part of national mentoring and supervision procedures.
[PHMT, DHMT, Facility Management Team, NASCOP]

- **Provide regular feedback to health care providers:** Most providers interviews reported that they received little, if any, feedback on the reports submitted or the quality of services they are providing. In order to support quality improvement, regular feedback should be provided by the DNOs and/or PNOs, as well as by AED.
[PHMT, DHMT, Facility Management Team, NASCOP, AED]
- **Provide supervision for community workers:** In order to strengthen linkages with communities, supervision and support must be regularly provided to the community health workers, satellite staff members, peer educators and socials workers who promote these links.
[CCC staff in charge of FBP and/or CCC coordinator]

REFERRAL SYSTEMS

- **Strengthen referrals system within hospital facility:** In general, referrals between clinical officers, nurses and nutritionists are operating effectively. However, there are some facilities at which disconnects between service providers were evident. Clearly delineated roles and responsibilities (i.e. responsibility for nutritional assessment); weekly staff meetings to discuss cases; and a well-organized, methodical record keeping system that clearly indicates if a client is on FBP are three mechanisms to support referrals system.
[CCC coordinator, Med Sup or equivalent]
- **Strengthen referrals between different levels of health facilities:** Providers at CCCs reported that there is a lack of follow up between the CCC and other facility levels, such as radiology or in-patient ward. In particular, there is a need to establish data transfer mechanisms to support record keeping and follow up. Strengthening follow up can also help capture data on clients re-entering the FBP program.
[Med Sup or equivalent]
- **Strengthen community referral systems:** Trained CHWs, HBCs, CCHAs, satellite facility peer educators and defaulter tracers can help to identify potentially eligible clients in the community and refer them to CCCs. They can also help conduct outreach, educating community members (especially OVCs) about CCC services, including VCT and FBP. This can be undertaken via advocacy campaigns, local trainings and provision of guidelines, and engaging and mobilizing local leaders, in combination with facility supervision and follow up.
[Med Sup, DMOH, DASCO, NASCOP, CSO, CBOs, AED, Facility in charge]

INTEGRATION AND LINKAGES

- **Map existing support mechanisms:** In order to have a clearer picture of what other support services exist—both in community outreach and government/implementing partner programs—a mapping exercise could help articulate what linkages are currently being leveraged, what additional opportunities exist, and how to bridge gaps.
[PNO, NASCOP, partners]

- **Strengthen linkages to other existing programs:** In order to support client adherence to the FBP regimen, discourage sharing of FBP products, trace defaulters, and enable ongoing support to graduated clients, linkages must be developed and strengthened with other food and nutrition support programs. Such programs may be designed to address household food security, general nutrition, water safety and hygiene, livelihoods support, advocacy and human rights, or other health issues. There is an opportunity to leverage existing community structures (e.g. CHWs, HBCW, TB ambassadors) to mobilize and train communities on proper nutrition, food security, stigma reduction and psychosocial support to those affected and infected with HIV. FBP services (referral and distribution) could be piggybacked on existing community initiatives.
[PHO, DNO, PNO, social workers, implementing partners]
- **Integrate data collection and reporting with other HMIS:** As noted previously, a number of efforts are underway to improve capture data in ART, TB, and other programs. Rather than developing a parallel data collection and reporting structure to those already in existence or in development, FBP data should be integrated into other health management information systems.
[DHRIO (District Health Records Information Office), DASCO, NASCOP, facility data clerks, implementing partners]
- **Foster inter-sectoral cooperation between Ministries:** The effectiveness and sustainability of FBP is linked to income generation, employment opportunities, livelihoods, household food security, and improved agriculture methods. In order to support integration of activities at the field level, there should be improved communication and collaboration between Ministries of Health, Agriculture and Economic Planning and Development at the national and regional levels.
[Ministries, private partners]

M&E AND REPORTING

- **Introduce data tally record books:** FBP focal points currently enter data into individual patient forms for each visit; a copy of the form is kept in the patient file while another copy is sent to AED. Furthermore, daily consumption reports are completed for inventory management and monthly consumption reports are sent to AED for re-order. However, without tally books or a computerized system, it is difficult to tabulate patient or consumption data to analyze the affect of FBP on client's BMI and health outcomes, or to analyze consumption to forecast and develop supply plans. AED has developed tally record books and has started to roll them out to some sites and NASCOP is rolling out nutrition registry books. Although the record books may initially add an additional reporting burden for staff, in the long-run they will make record keeping more efficient and will generate useful information for facilities, DNOs, PNOs and AED to use for performance and program management.
[AED, NASCOP, facility data clerks, DNO, PNO]

- **Conduct post-intervention monitoring:** Introduce a mechanism to capture re-entry data on clients who have graduated and re-entered the program. Although there is a space on the individual patient forms to indicate whether the client is returning, this information is not being captured at the aggregate level to provide insights into number and percentage of re-entering clients or the duration of time between graduation and re-entry. This information is critical for promoting quality improvement and verifying or falsifying provider perceptions regarding frequent patient relapse.
- **Reorganize reporting structure:** Currently, facility-level reports are sent directly to AED in Nairobi, bypassing the district and provincial levels. In order to better engage DNOs and PNOs and equip them with information to support supervision and follow up, copies of reports should be delivered to their offices in addition to the copies sent to AED. It is anticipated that the tally books will help streamline data into a more useful format than patient level data. It is critical that any changes in reporting structure do not delay reports as they are needed on a timely basis for supply chain management. Furthermore, the structure should be redesigned to allow for feedback mechanisms so that there is a two-way flow of information between facilities and supervisors.
[AED, NASCOP data clerks, DNO, PNO]
- **Ensure harmonized data collection tools:** The data capture forms have been revised and the assessment team observed that some facilities were using older versions of the record books for data collection and reporting. When new versions of tools are distributed, the older versions should be withdrawn and training provided on the changes. Staff should be made aware that consistent use of standardized forms is critical for harmonization and accurate data collection.
[NASCOP, AED]
- **Train staff on data management:** Instruction on filling of the FBP forms is a component of FBP training. However, training should also incorporate elements of data analysis and management to illustrate to staff the importance of the data and motivate them to be more engaged in the analysis and use of data. As a number of program staff currently view reporting as a major burden and may not fully appreciate the utility (especially if they rarely receive feedback). Appropriate training could foster data ownership, improve reporting and facilitate use of data for planning purposes. Training should be conducted both at the facility and district/provincial levels.
[NASCOP, AED]
- **Introduce appropriate technology for data management:** There are limitations to a paper-based system, and computers could facilitate data entry, analysis, reporting, storage and retrieval. Computers would be particularly useful in aggregating data across sites and regions, and supporting the integration of FBP data with other care and support data. However, the benefits of computers must be weighed against the cost, and issues of electrical supply and sustainability should also be considered.
[NASCOP, AED, partners]

- Integrate FBP reporting into existing data management system and reporting mechanisms:** As noted under “Integration,” FBP data collection should be integrated, where possible, into HMIS. Furthermore, reporting on patient outcomes could be integrated into care and treatment reporting. Integrating nutritional status data and information on FBP participation with other patient information will generate complete records that will permit rigorous assessment of current anecdotal evidence for the role of FBP in ART adherence, loss-to-follow-up and other significant clinical outcomes.
[NASCOP, AED, CDC, USAID, DHRIO, data clerks, partners]
- Harmonize graduation criteria with WHO guidelines:** Recognizing anthropometric cut-off points were developed as epidemiologic criteria for reporting on populations rather than for clinical diagnosis, they remain simple, accessible and relatively inexpensive tools for establishing program eligibility and exit. WHO guidelines recommend provision of therapeutic or supplemental feeding until the patient’s BMI is stabilized above BMI 18.5 for two to three consecutive months. The FBP program in Kenya is using graduation criteria of BMI ≥ 18.5 for two consecutive visits (assuming four weeks between visits, so for a period of approximately eight weeks), or BMI ≥ 20 , whichever comes first. Improvements to integrate medical records systems, together with quality improvement and M&E initiatives, will allow for determining whether these criteria are sufficiently sensitive, specific and sustainable.
[NASCOP, USAID, AED]

POLICY

- Create national indicator:** Include nutrition and HIV indicator(s) within harmonized national HMIS, such as the number and proportion of PLHIV and OVC who were nutritionally assessed with anthropometric measurement and found to be malnourished during a reporting period; the number and proportion of malnourished PLHIV and OVC who received food and nutritional support through FBP during a reporting period; and/or the number and proportion of FBP clients graduating from services.
[NASCOP]
- Support implementation of FBP program in line with national nutrition and HIV/AIDS policy:* Specific actions are needed to support implementation of activities laid out in the Kenya Nutrition and HIV/AIDS Strategy (2007-2010), such as including FBP in the work plan at the facility, provincial and national levels; allocating a budget line for FBP activities, allocate, train and deploy specific personnel, and fostering greater ownership on the part of the Government of Kenya.
[NASCOP]
- Foster government ownership of FBP:* It was observed in some settings that the FBP was viewed as a donor-driven and donor-supported initiative, outside the budget of facilities. However, by end of the project period in 2013, it is expected NASCOP will assume financial and management responsible for the program. Therefore, in order to ensure program sustainability, it is critical that government add a line for FBP to its budget, and ramp up the funding committed each year for the next four years. Government should begin assuming greater ownership both financially and technically.

- Map current Title II and PEPFAR food programs to support geographic overlay between food aid and targeted HIV supplementation: As a complement to national mapping efforts aimed at generating synergies between clinics and communities, USG and partners should advance efforts to align P.L.480 Title II programs with PEPFAR efforts in nutrition. Currently Food-for-Peace (FFP) assistance to Kenya exceeds \$135 million, exclusive of other USG humanitarian assistance, and focuses on the most food-insecure regions. Given the current drought and food crisis in Kenya, it is reasonable to expect additional challenges for FBP efforts. Clinical targeting will likely be undermined by growing household food insecurity.
[USAID, CDC, OGAC, WFP and partner organizations]

PROMISING PRACTICES AND CRITICAL OPPORTUNITIES

The assessment identifies key promising practices which are currently implemented in Kenya. Furthermore, it offers suggestions for critical opportunities for other PEPFAR-supported countries to consider in order to roll out efficient and effective nutrition and HIV/AIDS services, as well as opportunities for strengthening existing FBP programs.

PROMISING PRACTICES

Policy

- **Establish national policy, guidelines and strategy for nutrition and HIV.** In Kenya, NASCOP worked with partners to develop comprehensive and consistent policy and guidelines for nutrition and HIV/AIDS, which helped build awareness and consensus, both at central and regional levels. It is critical that such policy be in place before programs can be introduced; these projects must fit into and support the policy framework.

Training and supervision

- **Provide comprehensive training to staff** on FBP delivery including training on nutritional assessments, nutrition counseling, data management and supply chain management. AED and NASCOP have provided numerous trainings to various cadres, at regional and site levels, in order to ensure that a sufficient number of staff are trained and qualified to implement the program. Regular trainings are required in order to refresh and update staff on changes in protocol and train additional staff as the program expands or attrition occurs.

Counseling and education

- **Support effective and continuous counseling and education.** This component is critical for program success; without it, provision of food products will not meet program objectives. There is need to provide ongoing nutrition counseling and education to clients to ensure appropriate consumption of FBP, to support clients in consuming a nutritional, balanced diet consisting of local foods, to emphasize safe water practices, and to reiterate rational behind entry and graduation criteria.

Integration

- **Integrate nutrition services with other HIV/AIDS services.** Ensure that clients are able to access all services and products during the same visit, and try to promote efficiency and minimize wait time. In Kenya, the Comprehensive Care Centers were designed in order to create a “one-stop-shop” so that clients can conveniently receive all elements of care and treatment together.

- **Integrate nutritional data with ART and other data.** In Kenya, client FBP forms are maintained in same the patient file as all other treatment-related forms in order to incorporate nutritional status with other patient data points.

Community and inter-sectoral linkages

- **Leverage existing community programs and structures** (e.g. CHWs, home-based care volunteers) to mobilize and train communities on proper nutrition and food security to maximize benefits of the FBP program. Furthermore, CHWs have an important role to play in terms of early detection of malnutrition at the community level and referral of malnourished people to clinical services. At a number of sites in Kenya, facility staff and partners are working to train and engage volunteers and local leaders in order to build and strengthen links between the health facility and the community, and among different sectors (e.g. health and agriculture).

CRITICAL OPPORTUNITIES

Policy

- **Create national nutrition and HIV indicator(s)** to be synchronized within the national health management information system (HMIS). Programs should try to integrate nutrition indicators within existing structures as much as possible, rather than creating separate systems. Furthermore, indicators should fit into one national HIV M&E framework.
- **Harmonize program entry and exit criteria** in line with global standards and WHO recommendations. This will support global M&E and quality improvement efforts and also help contribute to the scientific evidence base of the impact of nutritional support on PLHIV.
- **Foster government ownership of program from the onset**, both financially and technically. FBP should be included in work plans at the facility, provincial and national levels; a budget line for FBP activities should be established, and adequate personnel should be allocated, trained and deployed to facilities.
- **Align USG humanitarian food contributions with HIV-related nutrition efforts** to the extent possible. Establish an interagency working group to monitor which agencies are providing what type(s) of food assistance to what populations in which regions of the country, in order to leverage food and nutrition resources most effectively.

Training and supervision

- **Prepare for loss and attrition of trained staff** by supporting regular Continuing Medical Education (CME) and TOTs and scheduling regular refresher training. Furthermore, strengthen mentorship opportunities to build a pool of staff at the facility, which can provide back up support and provides a learning opportunity for other staff.
- **Develop a mechanism for supervision through regular visits and use of checklists**, and/or ensure that supervision of FBP is integrated into other supervisory activities.
- **Utilize support supervision and feedback from reporting** to identify weak links in service delivery and program implementation and emphasize those elements in subsequent

- **Provide additional training and supervision to staff who take on increased workload.** Be sure to recognize and acknowledge staff for their efforts (and try to provide additional compensation, budget permitting).
- **Training and supervision activities should be designed and implemented with an eye to contributing to QI** and improving staff retention (i.e. by providing ongoing opportunities for learning and professional development, creating a cadre of support and better engaging staff in strengthening the program they are implementing).

Integration

- **Establish a collaborative methodology**, which can be a vehicle for advancing clinical quality.
- **Emphasize integration of FBP with other services** at comprehensive care centers by training other health cadres in addition to nutritionists, and educating providers and clients about comprehensive care and treatment.

Quality improvement, M&E data and reporting

- **Introduce a mechanism to capture relapse data** on clients who have graduated and re-entered the program.
- **Ensure that reporting structure is designed to involve key government officials** and relevant stakeholders so that they feel ownership and are able to provide supervision and feedback, and also better incorporate nutrition and HIV/AIDS program with other activities in their portfolios.
- **Institute a feedback mechanism** so that facilities receive regular feedback and support based on the reports they submit and can implement performance improvement measures.
- **Institute a mechanism for QI**, especially in terms of training, mentorship, reporting, information dissemination and coordination.
- **Establish national program standards for performance indicators**, including benchmarks for supervision, and generate buy-in at all levels, from national to facility (and community, where appropriate) to ensure capacity to support FBP implementation. Indicators should be linked to job aids and counseling cards, to measure staff performance against standard expectations of provided services.

Community and inter-sectoral linkages

- **Link FBP clients with livelihood and food security support programs** (such as WFP food security programs) in order to reduce dependency on FBP products, decrease the likelihood of sharing, and prevent graduated clients from re-entering the program. The government should designate coordinators at the district, regional and/or national levels in order to facilitate these linkages and coordinate support; the DNOs, for example, could chair quarterly meetings to manage this effort.

- **Support a staff position to foster and maintain coordination of nutrition activities** among government agencies and implementing partners at the district, regional and national levels.
- **Establish inter-sectoral working groups** to foster communication and collaboration between Ministries of Health, Agriculture and Economic Development at the national and regional levels and support the integration of to livelihoods, household food security, nutrition and HIV/AIDS activities at the field level.

CONCLUSION

The Government of Kenya has made great strides in implementing its nutrition and HIV/AIDS strategy in terms of integrating the nutritional needs of PLHIV into training curriculum for health workers, producing and disseminating guidelines and toolkits, and helping to provide nutritional support to eligible PLHIV. The Food by Prescription program is effective on many levels and has greatly enhanced care and treatment for PLHIV. Clients and providers alike appreciate that it is supporting adherence to and efficacy of ART, and improving nutritional status and health outcomes of PLHIV. Through the CCCs, FBP is integrated into comprehensive care so access to services is relatively convenient and most eligible clients are captured for enrollment.

Many of the broad challenges that the program faces are beyond the control of implementers and providers. These challenges include general food and nutrition insecurity in Kenya, human resources and budgetary constraints, and structural changes within the Ministry. Furthermore, sustainability of the FBP program depends on FBP phasing into a GoK activity over the next two year, with GoK assuming full ownership for the program.

Yet, there are certain quality improvement elements that implementers have an opportunity to address during the next years of the project. These include improvements in training, supervision, management of clinical flows and other dimensions of quality, data management, reporting as well as linkages between clinics and communities.

In terms of data, some information not currently captured would prove useful for measuring long-term program effectiveness, namely number and percentage of graduated clients who “relapse” and re-enter the FBP program. Furthermore, there is opportunity to use data collected on facility management of patient flows and quality to test hypotheses on project sustainability and the relationship between quality and patient adherence to therapy. These could be tested with facility-supplied data on ART “default” and FBP prescription records which provide information about household food security.

Kenya’s FBP program offers a number of promising practices to other countries and highlights critical opportunities. Hopefully, the results of this assessment can support partners in further strengthening an already successful program so that it will remain effective and sustainable for many years to come. Furthermore, other countries can learn from the Kenya experience to design and implement successful nutritional assessment, counseling and support initiatives.

ANNEX 1: ASSESSMENT TOOLS

Survey instruments available from AIDSTAR-One upon request:

- 1) Client interview tool**
- 2) Focus group interview tool**
- 3) Provider interview tool**
- 4) Stakeholder questionnaire**

ANNEX 2: MANAGEMENT OF UNCOMPLICATED UNDER-NUTRITION USING FOOD BY PRESCRIPTION

Management of uncomplicated under nutrition using Food by Prescription

Client category	Diagnosis	Eligibility Criteria ¹		Intervention Package ²	FBP Exit Criteria ³ & Action
		Primary	Secondary		
Orphaned and Vulnerable Children: 6–23 months	Severe undernutrition	– WHZ < -3.0 Z score – Or MUAC < 11 cm – Appetite test ✓	– Visible wasting – Bilateral pitting oedema +/-	– Infant and young child nutrition counseling – 37g/kg body weight/per day of RUTF, i.e. 21 – 28 sachets per wk ^{4b} – One bottle per month of safe water solution (SWS) e.g. WaterGuard®	– WHZ = or > -1.0 Z score, and – No oedema on 2 consecutive visits – Exit client from FBP & monitor progress
	Moderate undernutrition	– WHZ < -2.0 Z score – Or MUAC between 11 – 12 cm	– Linked OVC ^{5a}	– Infant and young child nutrition counseling – 100gms FBF (eg First Food®) per day i.e. 1 bag (3 kg) per month – One bottle per month of safe water solution (SWS) e.g. Water Guard®	– WHZ = or > -1.0 Z Score – Exit client from FBP & monitor progress
Orphaned and Vulnerable Children: 2–5 years	Severe undernutrition	– WHZ < -3.0 Z score – Or MUAC < 11 cm – Appetite test ✓	– Visible wasting – Bilateral pitting oedema +/-	– Young child nutrition counseling – 37g/kg body weight/per day of RUTF i.e. 35 – 42 sachets per wk – One bottle per month of safe water solution (SWS) e.g. WaterGuard®	– WHZ = or > -1.0 Z score, and – No oedema on 2 consecutive visits – Exit client from FBP & monitor progress
	Moderate undernutrition	– WHZ < -2.0 Z score – MUAC between 11 – 13 cm	– Linked OVC	– Young child nutrition counseling – 200gms FBF (eg First Food®) per day i.e. 2 bags (6 kg) per month – One bottle per month of safe water solution (SWS) e.g. Water Guard®	– WHZ = or > -1.0 Z score – Exit client from FBP & monitor progress
Orphaned and Vulnerable Children: 6–9 years	Severe undernutrition	– BMI for Age < -3.0 Z score – Or MUAC < 13.5 cm – Appetite test ✓	– Visible wasting – Bilateral pitting oedema +/-	– Nutrition counseling – 279gms per day of RUTF i.e. 21 sachets per wk – 100gms per day FBF (eg FirstFood®) i.e. 1 bag (3 kg) per month – One bottle per month of safe water solution (SWS) e.g. WaterGuard®	– BMI for Age = or > -3.0 Z score, and No oedema on 2 consecutive visits – Switch to FBP prescriptions only
	Moderate undernutrition	– BMI for Age < -2.0 Z score – MUAC between 13.5 – 14.5 cm	– Linked OVC	– Nutrition counseling – 200gms FBF (eg First Food®) per day i.e. 2 bags (6 kg) per month – One bottle per month of safe water solution (SWS) e.g. Water Guard®	– BMI for Age = or > -1.0 Z score – Exit client from FBP & monitor progress
Orphaned and Vulnerable Children: 10–17 years	Severe undernutrition	– BMI for Age < -3.0 Z score – Or MUAC < 16 cm – Appetite test ✓	– Visible wasting – Bilateral pitting oedema +/-	– Nutrition counseling – 279gms per day of RUTF i.e. 21 sachets per wk – 300gms per day FBF (e.g. Foundation Plus®) i.e. 2 bags (9 kg) per month – One bottle per month of safe water solution (SWS) e.g. WaterGuard®	– BMI for Age = or > -3.0 Z score, and No oedema on 2 consecutive visits – Switch to FBP prescriptions only
	Moderate undernutrition	– BMI for Age < -2.0 Z score – Or MUAC between 16 – 18.5 cm	– Linked OVC	– Nutrition counseling – 300gms per day FBF (eg Foundation Plus®) i.e. 2 bags (9 kg) per month – One bottle per month of safe water solution (SWS) e.g. WaterGuard®	– BMI for Age = or > -1.0 Z score – Exit client from FBP & monitor progress
Adults: 18 years and above	Severe undernutrition	– HIV + ve – BMI < 16 kg/m ² – Or MUAC < 16 cm – Or MUAC 16 – 18.5 cm with WHO stages 2 or 3 criteria – Appetite test ✓	– Visible wasting – Bilateral pitting oedema +/-	– Nutrition counseling – 279gms per day RUTF i.e. 21 sachets per wk – 300 gms per day FBF (eg Foundation Plus®) i.e. 2 bags (9 kg) per month – One bottle per month of safe water solution (SWS) e.g. WaterGuard®	– BMI = or > 16 kg/m ² , and No oedema on 2 consecutive visits – Switch to FBP prescriptions only
	Moderate/Mild undernutrition	– HIV + ve – BMI < 18.5 kg/m ² – Or MUAC between 16 – 18.5 cm		– Nutrition counseling – 300gms per day FBF (Foundation Plus®) i.e. 2 bags (9 kg) per month – One bottle per month of safe water solution (SWS) e.g. Water Guard®	– BMI = or > 20 kg/m ² – Exit client from FBP & monitor progress
Pregnant or post partum women:	Severe undernutrition	– HIV +ve – MUAC < 22 cm – Appetite test ✓	– Visible wasting – Bilateral pitting oedema +/- – BMI < 20 kg/m ²	– Nutrition and infant feeding counseling – 279gms per day of RUTF i.e. 21 sachets per wk – 300gms per day FBF (e.g. Advantage®) i.e. 2 bags (9 kg) per month – One bottle per month of safe water solution (SWS) e.g. WaterGuard®	– Pregnant: Weight gain = or > 1 kg/month ^{6b} – Post-Partum: Steady weight gain after 6 wks – And BMI = or > 20 kg/m ² – Switch to FBP prescriptions only
	Moderate/ Mild undernutrition; Pregnant: Poor weight gain ^{6b} ; Post partum: Weight loss ^{6b}	– HIV + ve – MUAC between 22 – 24 cm – And/or – Pregnant: Low weight gain < 1.5 kg/month – Post partum: Non intentional weight loss > 0.7 kg/month in normal & Low BMI (< or = 20 kg/m ²) clients; and – Post partum: Weight loss for low BMI (< or = 20 kg/m ²) clients	– Nutritional deterioration or failure to gain adequate weight despite infection control & or ART	– Nutrition and infant feeding counseling – 300gms per day FBF (eg Advantage®) i.e. 2 bags (9 kg) per month – One bottle per month of safe water solution (SWS) e.g. Water Guard®	– Pregnant: Weight gain = or > than 1.5 kg/month & and BMI > 20 kg/m ² – Post-Partum: Normal BMI & Weight loss < 0.5kg/month in 2 consecutive visits; and – Post- Partum & Normal BMI : Steady weight gain in 2 consecutive visits – Exit client from FBP & monitor progress

FBP – Food by prescription; WHZ – weight for height Z score; MUAC – mid upper arm circumference; RUTF – Ready to use therapeutic food; FBF – Fortified blended feed; OVC – Orphaned and vulnerable children; BMI – Body mass index.

1. Eligibility Criteria: Client enrollment for FBP service is based on primary eligibility criteria. Weight-for-weight Z score and BMI are main wasting nutritional criteria.

Presence of bilateral pitting oedema and MUAC values corresponding to moderate under nutrition is managed with RUTF until oedema is resolved and absent in 2 consecutive visits.

a. Linked OVC refers to at risk siblings in the same household as index child but NOT receiving care from comprehensive care centres or treatment centres.

Pregnant and post partum (first 6 months after delivery) women:

b. Normal and moderately undernourished pregnant women with low weight gain of < 1.5 kg/month in consecutive months during 2nd and 3rd trimesters.

c. Normal and moderately undernourished post partum women with high weight loss in consecutive months 6 weeks after delivery.

2. Intervention Package: RUTF alone is used to treat severe undernutrition in 6-59 months old children. In treatment of severe undernutrition in older children and adults combination of RUTF and supplemental feeds is recommended. Client Reviews and RUTF prescription refills are done weekly. 6-59 month-olds can switch from RUTF alone to FBF upon attaining > or > -2.6. Supplemental FBF is used in treatment of moderate acute under nutrition. Reviews and FBF prescription refills are done monthly.

Note: In children, actual RUTF dose should be determined on the basis of current weight and age.

d. Intake of 37g/kg body weight/day of RUTF yields 200 kcal/day body weight per day. The weekly RUTF prescription for an OVC aged 6–23 months ranges from 21 to 28 sachets.

3. FBP Exit criteria & Actions: Graduate clients from FBP services upon attaining anthropometric cut-off point e.g. WHZ equal to or greater than -1.6 for corresponding weight gain of 15% to 25% of enrollment weight in children. Appropriate rate of weight gain in pregnant women during 2nd and 3rd trimester for 2 consecutive months and BMI greater than 20 kg/m² in adults. Discharge and refer to treatment halls i.e. if client does not gain weight or loses weight in two successful visits or oedema persists for 2–3 weeks or failure of appetite test (ability to consume 4–1g of RUTF/kg body weight in one sitting for children and one sachet in case of adults). Linked OVC receive FBF only and are discharged at the same time as the index OVC.



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Ministry of Medical Services



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ANNEX 3: LIST OF KEY INFORMANTS INTERVIEWED

Name	Title	Facility/Location
Ms. Mary Wachira	Nutrition Program Manager	NASCOP/Nairobi
Dr. Nicholas Muraguri	Director	NASCOP/Nairobi
Mr. James Odeke	Medical Officer	CDC/Nairobi
Mr. Brian Njoroge	Program Officer	AED/Nairobi
Ms. Rachel Mwendo	DNO/Acting PNO	Kikuyu Hospital
Mr. Kennedy Ouma	Program Officer	Coptic Mission Hospital
Dr. Kimuyu	CCC in charge	Machakos District Hospital
Mr. Mindy Nicholas	District AIDS/STI Co-coordinator	Machakos District Hospital
Mr. Immaculate Andango	Provincial Nutrition Officer	Ministry of Health/Nairobi
Dr. Samuel Ngugi	Medical Director	Nyeri PGH
Ms. Lucy Wangari	Chief Hospital Nutritionist/ Acting PNO	Nyeri PGH
Mr. Peter Mwangi Nderitu	CCC Social Worker	Nyeri PGH
Dr. Mishak Ondondi	Medical Supervisor	Chogoria PCEA Hospital
Mrs. Katherine Munene	Hospital Administrator	Chogoria PCEA Hospital
Ms. Purity Maina	Nutritionist Supervisor	Embu PGH
Ms. Florence Oloo	Nutrition Supervisor	Thika District Hospital
Ms. Rhoda Chesang	CCC Nutritionist	Thika District Hospital
Ms. Rhoda Ndanuko	Supervisory Nutritionist	Pumwani Maternity Hospital/Nairobi
Dr. Charles Wanyoni	Medical Superintendent	Pumwani Maternity Hospital/Nairobi
Mr. Oscar Kamboma	PNO	Nutrition Office/Nyanza
Ms. Rosemary Atieno	DNO	Nutrition Office/Nyanza
Dr. Aggrey Otieno Akula	Medical Supervisor	Kisumu East District Hospital
Dr. Dennis Osiemo	Clinician	FACES Lumumba
Mr. Walter Mukhwana	IS Coordinator	FACES Lumumba
Dr. Patrick Oyaro	Project Coordinator	FACES Lumumba
Ms. Roseline Oyuna	Pharmaceutical Technologist	FACES Lumumba
Ms. Elizabeth Amagoye	CCC Coordinator	Maseno Mission Hospital
Mr. Nicholas Were	Hospital Administrator	Maseno Mission Hospital
Mr. Daniel Otieno	Data Analyst	St. Joseph's Nyabondo Mission Hospital
Ms. Mary Onyono	Hospital Matron	St. Joseph's Nyabondo Mission Hospital

Mr. David Obiero	Nurse in Charge	Siaya District Hospital
Ms. Joyce Nabwire	District Nutritionist	Siaya District Hospital
Mr. Kassim Lupao	Project Officer - Nutrition	Concern Worldwide/Kisumu
Mr. Tobias Masera	Project Officer	CARE Kenya/Siaya

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