

OPERATIONALIZING NUTRITION ASSESSMENT, COUNSELING, AND SUPPORT (NACS) GUIDANCE IN ZAMBIA:

A Report on FANTA Activities from 2013 to 2017



Abbreviations and Acronyms

ART	antiretroviral treatment
ASSIST	Applying Science to Strengthen and Improve Systems Project
BMI	body mass index
CNACS	community NACS
CNV	Community NACS volunteer
DHO	District Health Office
FANTA	Food and Nutrition Technical Assistance III Project
GRZ	Government of the Republic of Zambia
HEPS	high energy protein supplement
IMAM	Integrated Management of Acute Malnutrition
IP	implementing partner
LIFT II	FHI 360 Livelihoods and Food Security Technical Assistance II Project
MAM	moderate acute malnutrition
MOH	Ministry of Health
MUAC	mid-upper arm circumference
NACS	Nutrition Assessment, Counseling, and Support
NFNC	National Food and Nutrition Commission
OVC	orphan(s) and vulnerable child(ren)
PEPFAR	U.S. President's Emergency Fund for AIDS Relief
PMTCT	prevention of mother-to-child transmission of HIV
QI	quality improvement
RUTF	ready-to-use therapeutic food
SAM	severe acute malnutrition
SIMS	site improvement monitoring system
ZDHS	Zambia Demographic and Health Survey
ZMW	Zambian kwacha
ZPCT	Zambia Prevention, Care and Treatment Partnership



COVER ART: Iain McLellan

Overview

Drought, livestock disease, changes in copper and food prices, poverty, high dependence on rain-fed agriculture, and limited market incentives to shift from subsistence farming negatively affect the nutritional status of Zambia's population. Other underlying causes of malnutrition include inadequate child care and feeding practices, poor water and sanitation, and low dietary diversity, with high consumption of starchy staples. The 2013–14 Zambia Demographic and Health Survey (ZDHS) reported that 40 percent of children under 5 were stunted, compared with 45 percent in 2007 (Figure 1), and 10 percent of women 15–49 years were undernourished (Figure 2), reflecting no change from the 2007 ZDHS. The country suffers from the double burden of undernutrition and overnutrition, with a rapid increase in diet-related non-communicable diseases.¹

Zambia's high HIV prevalence (the seventh highest in the world) also affects nutritional status. HIV increases energy needs but reduces appetite, decreases nutrient absorption, makes the body use nutrients faster than usual to fight infection, and can result in poverty and food insecurity. All these factors lead to malnutrition, which increases vulnerability to opportunistic infections.

Zambia was classified as a middle-income country in 2012, but economic growth is highly uneven.² HIV and AIDS have reduced national economic output and increased the cost of medical supplies, treatment, and funeral expenses.

HIV transmission is driven mainly by multiple and concurrent sex partners, transactional and intergenerational sex, low condom use, low levels of male circumcision, migration and mobility, and mother-to-child transmission (National AIDS Strategic Framework 2017–2021).

Figure 1. Trends in nutritional status of children under 5 in Zambia, 2001–2014

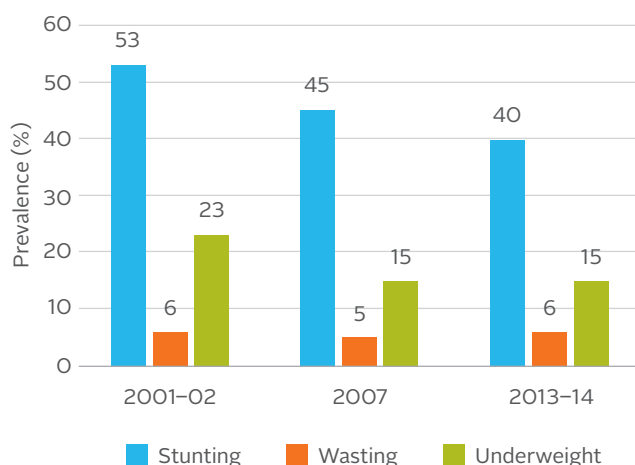
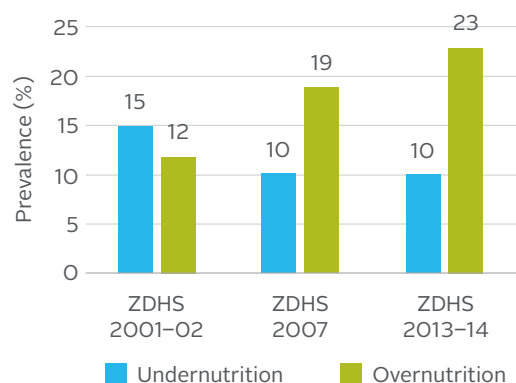


Figure 2. Trends in nutritional status of Zambian women 15–49, 2001–2014



Source: Zambia Demographic and Health Surveys 2001–02, 2007, and 2013–14.

¹ Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) Project. nd. "Nutrition-Related Non-Communicable Disease (N-RNCD) Country Profiles: Zambia." https://www.spring-nutrition.org/sites/default/files/ncd_profile_zambia_final2.pdf; National Food and Nutrition Commission. National Food and Nutrition Strategic Plan 2011–2015. Lusaka, Zambia: NFNC; Ministry of National Development Planning. 2017.7 National development Plan 2017–2010. Lusaka, Zambia: Ministry of National Development Planning.

² In 2015, Zambia had the fifth-highest Gini coefficient (57.5) in the world (United Nations Development Program. 2015. *Income Gini Coefficients*. <http://hdr.undp.org/en/content/income-gini-coefficient>).

Adult HIV prevalence declined from 19.0 percent in 2003 to 12.9 percent in 2015 (UNAIDS Prevention Gap Report 2016), with the highest prevalence in Lusaka and Western Province.

This decline—and accompanying improved life expectancy—is partly due to the impressive scaling up of antiretroviral treatment (ART) and prevention of mother-to-child transmission of HIV (PMTCT) services. Of the estimated 1 million people with HIV in 2016, over 800,000 were on ART (National AIDS Strategic Framework 2017–2010). However, stigma and gender-based violence in Zambia continue to constrain uptake of HIV services.

The Government of the Republic of Zambia (GRZ) has put in place plans and resources to address undernutrition and HIV. The National Food and Nutrition Commission (NFNC) was established in 1967 to promote and advise the government on food and nutrition activities. Zambia joined the Scaling Up Nutrition (SUN) movement in 2011. The National Food and Nutrition Strategic Plan focuses on the First 1,000 Most Critical Days Programme (MCDP). The National AIDS Strategic Framework 2017–2021 prioritizes HIV prevention, increased knowledge of HIV status, treatment, and viral load suppression; reduced stigma and discrimination; and increased domestic financing of the response.

The Food and Nutrition Technical Assistance III Project (FANTA) strengthens food security and nutrition policies, programs, and systems in developing countries through technical support to USAID, governments, and international and nongovernmental organizations. With funding from USAID/Zambia, over the past four years FANTA has provided technical assistance to the Zambian Ministry of Health (MOH) and NFNC in their efforts to respond to U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and USAID Multi-Sectoral Nutrition Strategy 2014–2025 priorities to integrate nutrition assessment, counseling, and support (NACS)³ into health policy, planning, and service delivery for people with HIV.

³In 2006, PEPFAR issued guidance on food and nutrition support for people with HIV and orphans and vulnerable children (OVC). Interventions addressing nutrition outcomes of adults living with HIV included the provision of therapeutic foods to treat acute malnutrition as well as nutritional assessment and counseling. These interventions, referred to as Food by Prescription programs, were initially implemented in five African countries with PEPFAR support. The provision of specialized food products became the focus of Food by Prescription programming, with limited attention to counseling clients on how to prevent malnutrition or maintain improved nutritional status after treatment. In 2009, recognizing the need to highlight the range of interventions available to prevent malnutrition and treat it successfully, the term NACS (for nutrition assessment, counseling, and support) was used to refer to this approach.

NACS Achievements

NACS integrated into 43 health facilities in 2 districts

NACS training and orientation:

18 district trainers

273 facility-based health care providers

16 community NACS trainers

470 community NACS volunteers

16 staff of second- and third-level hospitals and private nursing schools

7 PEPFAR IPs using the network of trainers to cascade NACS training

Integrated Management of Acute Malnutrition (IMAM) training:

32 national trainers

273 facility-based health care providers

Sensitization:

47 regional and district health managers and community leaders on the importance of nutrition and their roles in integrating NACS into health and community services

NACS is a client-centered programmatic approach to integrating priority interventions to prevent and manage malnutrition into health services along the continuum of care. Since 2013, FANTA has provided technical assistance to support NACS integration at the national level and in two high-impact districts (Kitwe and Mkushi), by helping to strengthen the enabling environment for NACS.

FANTA's contributions to Zambia's efforts to address the nutrition problems of children, women, and people with chronic infectious diseases, including HIV, are summarized below.

Strengthening the Enabling Environment for NACS Integration

- Supporting national workshops to develop NACS guidelines and training and counseling materials
- Supporting nutrition advocacy at national, provincial, and district levels
- Building capacity for integrated management of acute malnutrition (IMAM) and NACS through training and support for exchange visits
- Collaborating with the MOH and PEPFAR implementing partners (IPs) to improve NACS oversight and coalition building

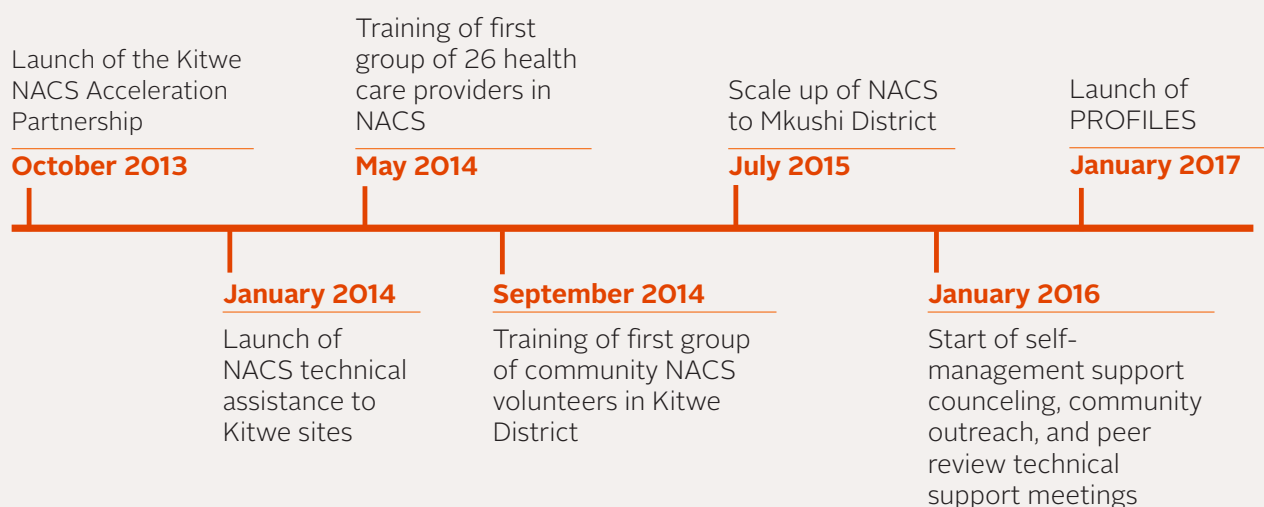
- Producing and analyzing reliable and timely information on nutrition indicators and health facility performance

Supporting and Accelerating NACS Integration at the District Level

- Training NACS trainers, and training and coaching facility-based health care providers and community NACS volunteers (CNVs)
- Operationalizing NACS guidance and generating lessons for scale-up
- Providing essential NACS supplies and equipment
- Strengthening systems for nutrition data collection and reporting
- Strengthening linkages between health facilities and their catchment communities by training CNVs to conduct nutrition screening and counseling on dietary diversity, immune system functioning, and ART adherence and retention

This report summarizes FANTA's achievements and results in Zambia over the past four years, highlights challenges and lessons learned, and provides recommendations for future programming.

Timeline of FANTA Activities in Zambia



Strengthening the Enabling Environment for NACS Integration

MAJOR ACCOMPLISHMENTS

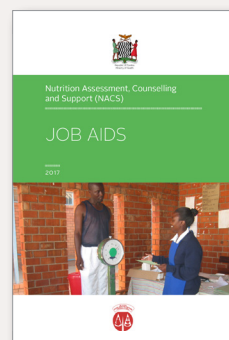
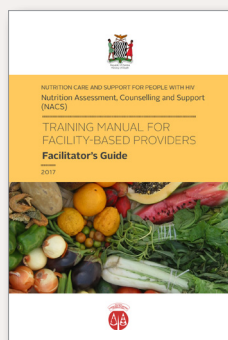
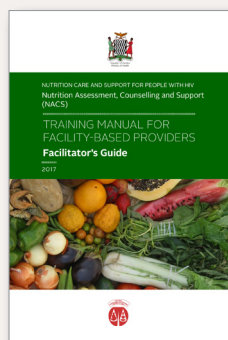
- Support to the MOH and NFNC to develop NACS guidelines and training and counseling materials used in five provinces by USAID IPs
- Support for an advocacy process that estimated future lives saved, permanent disabilities and childhood overweight/obesity averted, and economic productivity and human capital gains by improving nutrition in Zambia
- Capacity building of 64 NACS and IMAM trainers, and in-service NACS training, supervision, and coaching of 273 facility-based health care providers and 470 community NACS volunteers
- Collaboration with USAID-funded NACS Acceleration Partners to build district capacity for NACS integration
- Collaboration with multiple national and USAID IPs

Technical Assistance to Develop NACS Guidelines and Training and Counseling Materials

To contribute to institutionalizing NACS for HIV-affected children, adolescents, and adults and standardizing prevention and management of acute malnutrition, FANTA provided funding and technical assistance to the national Nutrition Technical Working Group to develop and update Zambia's national *Nutrition Guidelines for Care and Support of People with HIV* and NACS training materials and job aids.

In addition, to develop a NACS training package for facility-based health care providers (including a facilitators' guide, participant handbook, training PowerPoint, and job aids), FANTA worked with the MOH, NFNC, World Health Organization (WHO)/Zambia, PCI, the FHI 360 Livelihoods and Technical Assistance II Project (LIFT II), the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, the USAID/Zambia Thrive Project, the University of Zambia, and the International Baby Food Action Network. Based on training and implementation experience and current global guidance, in 2017 FANTA and the MOH updated the training package.

The Thrive Project, CARE International, PCI, and CDC-supported partners (the Eastern, Lusaka, and Southern provincial medical offices) have integrated NACS into health service delivery in five provinces using FANTA-produced materials.



Nutrition Guidelines for Care and Support of People with HIV and NACS training materials and job aids



Developing the NACS training materials and guidelines was a very useful learning process which brought me close to the reality of the benefits that can be derived from the documents. The NACS approach was value added to care given to people with HIV. This is because the service providers now have appropriate scientific reference for counseling and other care concerning nutrition. I personally benefited from learning updated nutrition information.

Dorothy Sikazwe, Chief Nutrition Officer, Zambia Ministry of Health

Using PROFILES for Nutrition Advocacy

The GRZ recognizes the role of nutrition in health, education, and the economy and has engaged with a number of stakeholders to address this issue. SUN initiatives have contributed to multisectoral planning of nutrition-specific and nutrition-sensitive interventions. A Civil Society Organization (CSO)-SUN Alliance was formed to advocate for resource commitments to improving nutrition during the first 1,000 days, from the start of pregnancy to a child's second birthday.

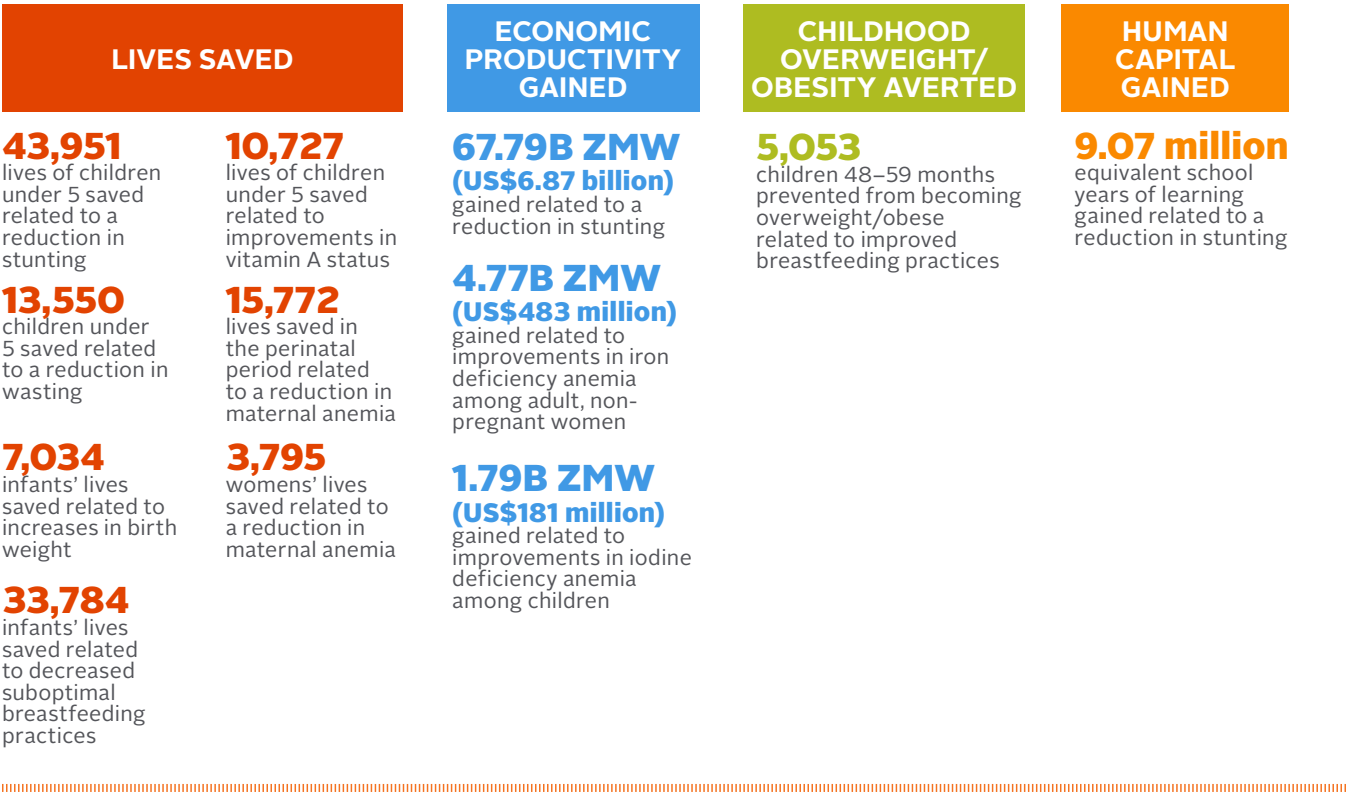
In 2017, the GRZ developed the second phase of the Most Critical Days Programme (MCDP II) to prevent stunting in children under 5 years. Strategic Objective 4 of MCDP II focuses on improving advocacy for nutrition, mobilizing media for advocacy and information dissemination, and developing communication advocacy materials for stakeholders from different sectors. Advocacy and communication activities have included influencing social protection and agriculture policies, developing an all-party parliamentary group on food and nutrition, and agreeing on a legislative review to strengthen multisectoral coordination. Further advocacy is needed, however, to reinforce government and partner investment in nutrition, position coordination of nutrition activities above line ministries, strengthen multisectoral coordination of nutrition-sensitive interventions, prioritize and harmonize legislation to improve nutrition, and strengthen integration of nutrition into sector plans and budgets.

In 2017, with the NFNC and MOH, FANTA led a nutrition advocacy process using PROFILES to build on and complement existing efforts to create an enabling environment for nutrition. The aim of the process was to involve Zambian stakeholders in assessing the health, economic, and human capital benefits of improved nutrition and the consequences of not adequately addressing nutrition in Zambia. PROFILES consists of computer-based models that calculate the benefits of improved nutrition over a defined period.

To oversee the process and bring together key stakeholders from multiple sectors and organizations, FANTA facilitated the establishment of a core group of representatives from government ministries, WHO, the World Food Programme, the University of Zambia, CARE, CSO-SUN, and PATH. FANTA then facilitated a participatory process that resulted in estimates of the negative consequences of failing to reduce nutrition problems and the benefits of improved nutrition from 2017 to 2026. These estimates can be used for future nutrition advocacy. Figure 3 presents some of the estimated benefits of nutrition improvements.

FANTA also worked with stakeholders to develop a National Nutrition Advocacy Plan that prioritized target audiences and aligned advocacy efforts to achieve the potential gains identified by the PROFILES process. The plan's target audiences are the Offices of the President and Vice-President; key line ministers, Cabinet officers, and members of Parliament; permanent secretaries,

Figure 3. Estimates of future lives saved, economic productivity gained, childhood overweight/obesity averted, and human capital gained, 2017–2026, Zambia PROFILES 2017



directors of key line ministries, relevant statutory boards and parastatal organizations that influence nutrition; cooperating partners; the private sector; civil society organizations and opinion leaders; and the media. The plan includes desired changes, activities, and materials for nutrition advocacy, as well as a timeline and proposed actors for implementation.

Working with the NFNC, FANTA also developed six advocacy briefs to support implementation of the plan by government offices and sectors, media, the private sector, cooperating partners, and civil society. The briefs, which include PROFILES estimates as a compelling argument for increased nutrition action and investment, provide information on the nutrition situation in Zambia, the consequences of malnutrition (related to health, education, agriculture, economic productivity, social protection, etc.), and the role of each audience in improving nutrition.

Strengthening the Capacity of the MOH at Central and Provincial Levels

Zambia was one of the first countries to operationalize the NACS approach. FANTA worked closely with the MOH and, until it was dissolved in 2016, the Ministry of Community Development, Mother and Child Health, to integrate NACS into GRZ programming. The MOH, in collaboration with UNICEF, supports inpatient management of children under 5 with severe acute malnutrition (SAM) under the national IMAM program. At the MOH's request, FANTA supported IMAM and NACS training of 32 national and provincial trainers and 118 health care providers and trained 16 staff of second- and third-level hospitals and private nursing schools in NACS.

In 2016, FANTA supported a visit to Tanzania by Zambian health officials to share experiences with evidence-based approaches to integrating NACS into government health care services. The delegation met government and IP representatives, observed NACS interventions at health facility and community levels, and discussed solutions to NACS implementation challenges, including human resources, supply chain management, and M&E.

Collaborating for NACS Integration and Scale-up

FANTA worked with PEPFAR/Zambia IPs to strengthen coordination and integration of NACS into prevention, care, and treatment of infectious and non-communicable diseases. Support included technical assistance to the Thrive Project to develop standard operating procedures for NACS and orientation of ART providers, supported by FHI 360's Zambia Prevention, Care and Treatment Partnership (ZPCT) Project, including nutrition information in SmartCare reporting. NACS training materials developed with FANTA's technical assistance were used by the Thrive Project, LIFT II, and ASSIST; by PCI with funding from the U.S. Department of Defense; and by Eastern, Lusaka, and Southern provincial medical offices with support from the U.S. Centers for Disease Control and Prevention (CDC).



FANTA in Zambia provided leadership in nutrition technical guidance, materials development, capacity building, and food by prescription. It led the train for changes to nutrition programming in the country in terms of collaboration and technical working groups and was at the helm in setting the standards.

*Helen Khunga Chirwa, Nutrition Advisor,
USAID/Zambia*



FANTA interventions went beyond ART clinics to make sure people with HIV are seen as a whole person. My own background in nutrition now has a fertile landing space in HIV care, and people on ART are in better shape to respond to treatment. Nutrition is an invisible but valuable intervention in the HIV response. NACS was integrated into the treatment and referral network under ZPCT II, so it generated evidence on which the Ministry of Health can base future policies around nutrition and care and treatment. NACS has also highlighted the issue of malnutrition in adults in Zambia.

*Chileshe Chilangwa, former Deputy Country
Director, FHI 360/Zambia*

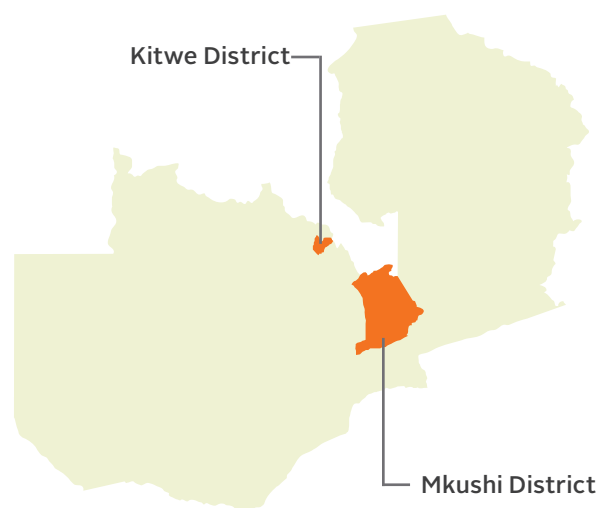
Supporting and Accelerating NACS Integration at the District Level

In 2013, FANTA began supporting the MOH in piloting integration of NACS into health care delivery in Kitwe District in Copperbelt Province, in collaboration with ASSIST, LIFT II, the Thrive Project, and PCI. The initiative, referred to as the Kitwe NACS Acceleration Partnership, was designed to provide the GRZ with experience operationalizing NACS guidance and to generate lessons for further scale-up to other districts. In 2014, FANTA supported scale-up of NACS integration to Mkushi District in Central Province. NACS services have now been integrated into 25 health facilities and catchment communities in Kitwe District and 18 in Mkushi District.

NACS Acceleration Partnership in Kitwe District

Kitwe District was chosen for the NACS Acceleration Partnership because of its largely urban population, high HIV prevalence, and high rates of stunting and underweight. FANTA supported a NACS Acceleration Plan to build the capacity of district authorities to plan, coordinate, and implement NACS and inform scale-up to other provinces. With USAID/Zambia funding, FANTA collaborated with the Thrive Project and PCI on nutrition care and support, with LIFT II on health facility-community referrals, and with ASSIST on quality improvement (QI).

In 2013, in collaboration with central, provincial, and district government representatives and PEPFAR IPs, FANTA led the development of a joint Memorandum of Understanding and workplan with the Kitwe District Health Office (DHO) to integrate NACS into health care services at key service delivery points in 25 health facilities. NACS target groups included people on ART, people receiving antenatal care and PMTCT services, and orphans and vulnerable children (OVC) regardless of HIV status. The NACS package



MAJOR ACCOMPLISHMENTS

- Successful scale-up of NACS services across the continuum of care in 43 health facilities in two districts through capacity building of central and district government
- NACS capacity building through training 34 district trainers, and in-service NACS training and coaching 273 facility-based health care providers and 470 community NACS volunteers (CNVs)
- Provision of anthropometric equipment including 292 weighing scales, 47 length/height boards, 732 mid-upper arm circumference (MUAC) tapes, and 580 body mass index (BMI) wheels—and print materials: 1,138 copies of NACS *Job Aids* and 312 health facility NACS training manuals
- Development of community NACS training and counseling materials in collaboration with government and USAID IP stakeholders
- Training of 16 community NACS trainers and NACS training and orientation of 470 CNVs in Kitwe and Mkushi districts
- Coaching and mentoring CNVs to improve interpersonal counseling skills, foster client self-management and behavior change

included anthropometric and clinical assessment; counseling on diet, treatment adherence, and water, sanitation, and hygiene (WASH); and referral to nutrition-sensitive (economic strengthening, livelihoods, and food security) support.

FANTA conducted site assessments in 25 health centers to identify opportunities to integrate NACS and needs for training, equipment, and materials. FANTA then supplied needed anthropometric equipment—292 weighing scales, 47 length/height boards, 732 mid-upper arm circumference (MUAC) tapes, and 580 body mass index (BMI) wheels—and print materials including 1,138 copies of NACS *Job Aids*, 312 health facility NACS training manuals, and 251 community NACS training manuals. FANTA also mobilized buy-in and support for NACS by orienting district health managers on the importance of nutrition, and training and coaching 142 facility-based health care providers and 146 community volunteers in NACS.

FANTA collaborated with the MOH and Thrive Project to ensure that specialized food products were available at the supported sites for the treatment and management of acute malnutrition. The Thrive Project procured ready-to-use therapeutic food (RUTF) and high-energy protein supplement (HEPS). FANTA provided technical assistance for quantification, transportation, and consumption reporting of the specialized food products. In 2015, the Thrive Project discontinued the supply to FANTA-supported sites as part of its plan to commercialize the product.

As a result of these activities, NACS guidance was operationalized in antenatal, postnatal, pediatric, outpatient, TB, and ART departments in 25 health facilities in Kitwe District.

The limited number of nutritionists had been a challenge in implementing effective and Kitwe District now has at least six health workers and eight community volunteers trained in NACS. NACS is provided in ART and under-5 clinics, TB corners, and postnatal and outpatient departments. Some of the training participants



Nutrition assessment, counseling, and support, though supported by partners, is a government activity which all staff in our health facilities should embrace as a service which is meant to add value to the care and treatment provided to people of all age groups.

Dr. Elwyn Chomba, Permanent Secretary, Ministry of Community Development, Mother and Child Health, 2013



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Nkandu Chungu, Kitwe District Nutritionist

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Scale-up to Mkushi District

In 2014, at the request of USAID/Zambia, FANTA supported scale-up of NACS to Mkushi District in Central Province. Mkushi was selected because of its high HIV prevalence and location on a major transport route between Zambia and Tanzania, which makes it an important location for epidemic control. Mkushi provided an opportunity to apply lessons learned from the Kitwe pilot and integrate NACS into a rural district with a widely dispersed population and health facilities, in contrast to urban, densely populated Kitwe. FANTA, LIFT II, and ASSIST conducted joint training of district and health facility staff and worked with the DHO to integrate NACS monitoring and reporting into the district health information management system. NACS guidance was operationalized in antenatal, postnatal, pediatric, outpatient, TB, and ART departments in 18 health facilities in Mkushi District.

Support for Health Facility-Level NACS Services

Management of SAM and moderate acute malnutrition (MAM) requires nutrition assessment, clinical examination, and classification of

nutritional status; initiation of treatment with medications and specialized food products, if available; progress monitoring; and recordkeeping. Under the national IMAM program, district hospitals in Zambia provide inpatient care for children under 5 with SAM and medical complications. When their condition is stable and appetite has returned, children are discharged from hospital to continue weekly outpatient treatment in health facilities closer to their homes.

Building Capacity of Facility-Based Health Care Providers in NACS

With the MOH, FANTA co-facilitated training of 32 trainers (provincial and district trainers) and 206 Kitwe and Mkushi district health care providers in a 5-day skills-based NACS course that included a practicum in health facilities. To address staff attrition and frequent rotation, FANTA provided a 1-day NACS orientation for 67 health care providers who did not attend the 5-day training.

Improving the Quality of NACS Services

FANTA encouraged the use of NACS data for service improvement through quarterly NACS review meetings at the DHOs and strengthened the capacity of the district nutritionists to make health facility coaching visits. These visits identified areas for improvement and the support required to address service delivery and data management issues, for example, the



When I was trained as a clinical officer in 1997, BMI was known, but not classification of nutritional status. Patients were never screened for malnutrition. On the curative side, we tend to deal only with disease. It's like there's a river flowing downhill, with us at the bottom. We see people drowning, and every time we save one, we see another coming down with the flow. The best we can do is go up the hill and find out what's pushing people into the river. Nutrition has an important effect on the outcome of disease.

Grace Banda, NACS trainer, Kamakonde Health Centre, Kitwe District

need to update client files with accurate BMI and nutritional status, including for ART clients, and the need to counsel malnourished clients on improving their diets using locally available foods when specialized food products were not available. FANTA and the district nutritionists also provided refresher orientation for health care providers on nutrition assessment, counseling, and recording nutrition assessment information.

In 2016, USAID/Zambia conducted a PEPFAR Site Improvement Monitoring System (SIMS) assessment of all PEPFAR IP support in two health facilities in Kitwe District (Ipusukilo and Kamfinsa health centers). FANTA worked with LIFT II and ASSIST to remediate shortcomings identified in the SIMS assessment by accelerating QI activities, establishing a two-way referral system in Kamfinsa, and coaching health care providers to monitor pre-ART and ART clients' nutritional status in Ipusukilo, in collaboration with the FHI 360 ZPCT Partnership Project.

Additionally, with the Kitwe and Mkushi DHOs, LIFT II, and ASSIST, FANTA analyzed client flow to inform monitoring and reporting and harmonize NACS data collection and reporting forms. With LIFT II and ASSIST, FANTA also recommended revisions of the complex national nutrition register and distributed copies to all health facilities providing NACS services.

By the end of March 2017, 223,997 clients had received nutrition assessment. Of those assessed, 183,797 (82 percent) were counseled. About 10 percent of clients who received nutrition assessment were found malnourished, with 1.5 percent diagnosed with SAM, 5 percent with MAM, and 4 percent with overweight or obesity. Of the clients found undernourished, 9,642 (70 percent) received specialized food products.

Community NACS Training

To strengthen the continuum of care between health facilities and communities, in 2014 FANTA worked with the then Ministry of Community Development, Mother and Child Health; PCI; NFNC; and the Thrive Project to develop a 5-day community NACS (CNACS) training manual. The manual includes guidance on nutrition screening using MUAC, referring malnourished clients to health facilities for further assessment and treatment, follow up malnourished clients in their homes, and tracking defaulting clients to encourage adherence to treatment and scheduled clinic visits. Based on an assessment of counseling skills of service providers, FANTA developed and field tested a nutrition counseling flipchart and job aids and trained 40 CNVs, NACS coordinators, and district officers in their use.

In 2015, in collaboration with PCI, FANTA provided the first round of 5-day NACS training to 16 community trainers and 105 community health assistants, community health workers, TB-Dots (directly observed treatment, short course) supporters, malaria champions, home-based care volunteers, and community counselors in NACS.⁴ Between 2015 and 2017, FANTA trained 50 CNVs in Kitwe and 81 in Mkushi districts, and provided



⁴ In 2010, the MOH addressed the health workforce shortage and standardized recruitment, training, remuneration, and supervision of community health workers by creating a new cadre of community health assistants (CHAs). The first group of CHAs was deployed in 2012. CHAs are assigned to health posts, the lowest-level health facilities. While CHAs are trained and paid by the MOH, many other community-based volunteers work in and around health centers, with different IP training and incentives.

a 1-day orientation in nutrition screening of 365 CNVs who did not receive the 5-day training. CNVs in Kitwe then provided nutrition screening and counseling of 1,170 community members. Observations of trained CNVs found improved counseling skills, such as questioning and using teach back to verify client understanding.

FANTA supported LIFT II in training government and community partners to map nutrition-specific and nutrition-sensitive activities in health facility catchment areas and develop tools and tracking mechanisms to refer malnourished NACS clients to economic strengthening, livelihood, and food security (ES/L/FS) support to improve their nutritional status.



FANTA Community Engagement Officer Wilson Kabwita in a community visit in Kitwe District, with (from left) CNV Mary Sinkala, client Eunice Mutumba, and CNVs Lucy Chipoya, Gertrude Chella, and Mary Jere. Photo: Wendy Hammond

Community Mobilization

Responding to gaps identified by stakeholders and NACS implementers, FANTA used social and behavior change approaches to support adoption of improved nutrition practices such as consumption of locally available nutritious foods, handwashing and feces disposal, and ART adherence. After identifying community resources and barriers and facilitators of optimal nutrition practices in Kitwe District, FANTA developed a package of communication materials to promote those practices and trained and coached CNVs in their use.

Focusing on five health facility catchment communities, FANTA interviewed health care providers and community volunteers and observed nutrition counseling in health facilities and households to identify needs for capacity building, opportunities to increase NACS service demand and uptake, and improve outcomes for malnourished community members. A FANTA Community Engagement Officer in each district observed home visits and community group meetings and coached CNVs on counseling, screening, and documentation.

Using participatory community mapping in Kitwe in 2015, FANTA identified relevant community service providers and community members to recruit as CNVs. Community consultations identified barriers to and motivations for optimal nutrition and ART adherence practices. For example, perceptions of what comprises a “good diet” overlooked locally available nutritious foods, and HIV-related stigma prevented some seropositive community members from disclosing their status. Based on these findings and an assessment of the CNVs’ education and counseling skills, FANTA worked with the Kitwe DHO to develop and test graphics to explain why a diverse

diet is important, how the immune system and ART work, why people with HIV can become resistant to drugs, and how to do effective counseling. Because documenting and tracking referrals of malnourished community members was a challenge for the CNVs, FANTA worked with the Kitwe DHO to develop user-friendly referral and reporting forms.

Between 2015 and 2016, the CNVs conducted nutrition screening and counseling of 1,170 community members in health facilities and identified 99 people as malnourished. They then made home visits to follow up malnourished clients and trace ART clients who were lost to follow-up. The CNVs also conducted nutrition screening and education in schools and peer savings group meetings. For example, in the Mulenga Health Centre catchment community, CNVs visited two community schools to screen orphaned and vulnerable pupils for malnutrition, and in Kawama Health Centre catchment community, CNVs held group discussions of nutrition practices, measured MUAC and referred

children found to be malnourished to the health centre. In the Ipusukilo Health Centre catchment community, CNVs organized two women's groups meetings to discuss nutrition and ART adherence.

Working with FANTA has been one of the building blocks in my career as a medical doctor and a manager. It brought out the importance of nutrition not only in children but also in adults and people with HIV. Most of my patients' nutritional status has impacted their health and treatment outcomes. Because of gaps among organizations and institutions offering different social services to address community needs, strengthening linkages and referrals is one component that should be emulated by all stakeholders.



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Dr. Mackford Chipili, (former) Mkushi District Medical Officer

Initiative to Improve ART Adherence and Retention in Kitwe District

The UNAIDS goals of 90 percent of people with HIV knowing their status, 90 percent of people who know they are HIV positive receiving antiretroviral treatment (ART), and 90 percent of people on ART achieving viral suppression by 2020 highlight the need for more effective interventions to achieve these ambitious targets.

In 2016, FANTA applied social and behavior change approaches to improve HIV client outcomes in Kitwe District by enhancing counseling and community-based communication in five health facilities and their catchment communities. FANTA trained community NACS volunteers (CNVs) who had already received basic NACS training in counseling and community engagement, strengthening their ability to promote ART adherence and retention with a self-management and behavior change approach. FANTA then supported the trained CNVs with ongoing coaching and mentoring throughout the implementation period. Self-management counseling was integrated into health facility ART departments in all five facilities.

At community level, CNVs conducted home visits to reach ART clients who had missed clinic appointments and to follow up clients diagnosed with SAM or MAM, providing adherence and nutrition counseling. Group education on ART and nutrition was offered at community-wide events and peer group meetings, and people needing clinical support for malnutrition or HIV testing were referred to health facilities.

Between March and December 2016, the CNVs 1,047 home visits; assessed and classified the nutritional status of 2,187 clients; conducted nutrition education for 510 people and ART education for 151; counseled 403 community members on nutrition and ART; and referred 138 people with unknown HIV status for counseling and testing. During these months, FANTA assessed the quality of counseling services at midline (August 2016) and end-line (March–May 2017) through observation and client exit polls, finding improved counseling skills. CNVs reported improved client understanding of adherence issues and dietary management of treatment. Data collection for the quantitative and qualitative evaluation was completed in March 2017. Preliminary findings indicate significant improvement in patient adherence and retention in the intervention sites over the implementation period.

Challenges and Lessons Learned

The scope of interventions to prevent and manage malnutrition is wide ranging, from intensive clinical care to behavior change. Malnourished clients are managed continuously or at repeated intervals (weekly for outpatient care). Multiple interrelated and interdependent interventions (inpatient, outpatient, and community outreach) are delivered over time (2 months on average) at different levels of the health system (district management and secondary and primary care including community outreach) by a multidisciplinary group of health care providers (managers, physicians, nurses, community health workers, and volunteers). Integrating this complex intervention into Zambia's national and district health care system posed many challenges, which are described below.

Limited focus on nutrition nationally.

Malnutrition has not received the same attention as other health problems in Zambia despite the country's poor nutrition indicators. The underlying determinants of nutritional status—food, health, and care—involve multiple sectors (health, agriculture, education, water, social services), whose contributions are essential to effectively address Zambia's nutrition needs. Maximizing the impact of these contributions requires coordinating the efforts of the five sectors. The GRZ recognizes this need, but mechanisms for coordination are weak, and nutrition has been largely relegated to the health sector. To contribute to addressing the need for national multisectoral nutrition action, FANTA supported the GRZ's advocacy efforts using PROFILES. Additionally, FANTA supported district NACS review meetings in Kitwe and Mkushi that periodically included representatives of the agriculture and community development sectors.

Limited human resource capacity for nutrition.

There are many open positions for nutritionists at each level of the MOH. Most nutrition training has been at diploma level and oriented to food science and technology rather than the clinical and socioeconomic aspects of nutrition. In 2011, the

University of Zambia introduced a 5-year BSc in Human Nutrition to train nutritionists and dieticians, and in 2014, the university introduced an MSc in Human Nutrition. However, nutrition content in the training curricula for nurses and clinical officers who staff district health facilities is minimal. To strengthen nutrition knowledge and skills, FANTA trained national and provincial NACS trainers and district-level nurses, nutritionists, midwives, and nursing assistants to implement, monitor, and report on nutrition services, and developed national NACS training and resource materials.

Although health care providers in the supported facilities were trained in NACS, heavy workloads and understaffing meant that comprehensive NACS services were not always provided. Frequent staff rotation also left some facilities with inadequate staff trained in NACS. In most sites, trained providers delegated nutrition screening, counseling, and follow-up to ART adherence counselors and community volunteers. In response, FANTA provided NACS orientation for new staff who had not received the 5-day training and trained CNVs to assist with NACS in health facilities and provide NACS services at community level.

Poor access to health and nutrition services.

Low service coverage is partly the result of the opportunity costs of travel and negative experiences with health care providers. FANTA's CNACS initiative aimed to take NACS services to the communities, increase service uptake by referring malnourished people identified in the community to health facilities, strengthen two-way communication in counseling, and provide counseling on optimal nutrition practices and ART adherence and retention by trusted CNVs in the facilities and communities.

Lack of specialized food products to treat acute malnutrition. The health facilities FANTA supported in Mkushi and Kitwe districts were not able to provide the full package of NACS services because they lacked a consistent supply

of specialized food products to treat acute malnutrition. There is no central government supply system for RUTF or supplementary food to treat acute malnutrition, although USAID supported purchase of HEPS from the Zambian manufacturer COMACO in districts supported by the Thrive Project, which included Kitwe until 2016. With no government logistic management system for specialized food products and transport challenges, stock outs are common. In Kitwe and Mkushi, FANTA stepped in to transport specialized food products to target health facilities as a short-term solution. FANTA also included supply chain management in training and intensified counseling training on how to improve diets using locally available foods.

Lack of standardized documentation of nutrition data. NACS integration involves ensuring that health facilities collect, record, and report nutrition data to monitor the quality of services and adjust service delivery accordingly, as a part of efforts to improve the quality of services. Zambia's lack of standardized data collection and reporting tools, however, was a challenge for monitoring NACS services. To help standardize

nutrition data collection and reporting in Kitwe and Mkushi districts, FANTA and other NACS Acceleration Partners worked with the MOH and NFNC to develop and simplify a national nutrition register, train health care providers in its use, and provide standardized NACS data collection and reporting tools. Documentation of nutrition services was included in NACS training provided by FANTA. As a result, recording of nutritional status improved in Kitwe and Mkushi health facilities.

Limited government integration of NACS.

For sustained, high-quality NACS and systemic scale-up to health facilities and communities in the two target districts, it was critical to work with the GRZ to strengthen human resources and service delivery. While NACS integration aligned partners behind a common principle, government ownership of NACS services requires continued effort. Government actors at various levels in Zambia created an enabling environment for NACS, but their financial involvement was limited. With no specific national budget allocation for NACS under the MOH, sustainability of efforts is not certain.

Recommendations

Chee et al. (2013) distinguish between activities that improve health care services, primarily by increasing inputs (or support), and those activities that strengthen health systems, and require “more comprehensive changes to performance drivers such as policies and regulations, organizational structures, and relationships across the health system to motivate changes in behavior and/or allow more effective use of resources to improve multiple health services.”⁵ FANTA provided immediate inputs for NACS while also identifying the following priority areas for strengthening Zambia's health system over the long term:

- Strengthen integration of NACS into pre-service training of nurses, clinical officers, and community health assistants.
- Include NACS competencies in national and provincial supportive supervision and quality assurance protocols.
- Scale up NACS to additional districts, sensitizing multisectoral district officials on the importance of nutrition, tapping national NACS trainers to train district and provincial trainers to roll out training of health care providers, and integrating NACS into regular data collection and reporting.
- Promote continuous, accurate nutrition data collection and reporting for older children, adolescents, and adults at health facility level, as well as use of nutrition data to inform programming at all levels.
- Accompany health systems strengthening efforts such as NACS with efforts to help the GRZ develop multisectoral action plans and budgets for full ownership and accountability.
- Include anthropometric tools (MUAC tapes, height boards), NACS job aids, and specialized food products (RUTF and HEPS) in district and provincial budgets, and allocate national resources for the procurement and distribution of these supplies to districts that implement NACS.

⁵ Chee G, Pielemeier N, Lion A, and C Connor. “Why Differentiating between Health System Support and Health System Strengthening Is Needed.” *International Journal of Health Planning and Management* 28(1): 85–94.



FANTA/Zambia Project Manager Dr. Earnest Muyunda with Tendai Mdimu and Catherine Kagulura in the Lusaka office



Kitwe and Mkushi district FANTA/Zambia staff Kelvin Lambwe, Jemmy Musangulule, Lucy Nyirenda, Joseph Lesho, Musoka Kazenene, Grace Hazemba, Martin Mbale, Wilson Kabwita. Not shown: Peter Sifuniso and Clarice Kasanda



Publications

Zambia Ministry of Health, National Food and Nutrition Commission and Food and Nutrition Technical Assistance III Project (FANTA). 2017. *Nutrition Assessment, Counselling and Support (NACS) Training Manual for Community Volunteers: Facilitator's Guide*. Lusaka.

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Visit www.fantaproject.org/countries/zambia to access many of these materials.

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