Food and Nutrition

Nutrition shapes every aspect of growth and development, directly influencing cognitive development, immune function, and overall health and well-being. A nutritious diet provides infants and children with the foundation for a healthy start in life and men and women with the means to nurture healthy families. Yet undernutrition, caused by a diet lacking needed nutrients or diminished by disease, is estimated to affect close to one billion people globally. Children under five are particularly vulnerable: Undernutrition causes more than one-third of all child deaths and stunts physical and cognitive growth among children who survive.

Nutrition is a complex, cross-cutting problem entwined with poverty and disease, so solving nutrition challenges requires innovative approaches, including nutrition-specific interventions (such as promotion of optimal child-feeding practices); strong methods to test and implement integrated, nutrition-sensitive interventions (such as supportive food security, livelihoods, and agriculture), and intensive capacity strengthening of national or country actors to apply effective interventions at scale.

Building on over 40 years of global health experience, University Research Co., LLC (URC) and its non-profit affiliate, the Center for Human Services (CHS), have developed and implemented successful solutions to food and nutrition challenges in over a dozen countries.

URC-CHS uses modern quality improvement concepts (see box on page 2) to successfully scale up evidence-based interventions. We pay particular attention to creating sustainable monitoring systems, locally specific adaptations, capacity strengthening in problem solving, supportive supervision in coaching and mentoring, and broad stakeholder engagement.

Recognizing the importance of gender roles and responsibilities in nutrition, we look for opportunities to engage and empower
women. Along with our partners in Ministries of Health and officials at all health system levels, we are responding to the global challenge of undernutrition to empower health systems and communities to achieve better services, practices, and behaviors for improved nutrition.

**Strengthening Nutrition Services and Support**

We design and implement projects that provide nutrition-specific services and support through a variety of approaches to improve maternal nutrition and infant and young child feeding. Starting with an understanding of health systems, we ground our work in an understanding of local health and nutritional behaviors. Drawing on a broad toolkit and local priorities, such as nutritional screening and counseling, we implement a comprehensive and client-centered approach called nutrition assessment, counseling, and support (NACS) for adults and children.

We have experience in implementing nutrition components within HIV/AIDS care and treatment as well as holistic programs for mothers and children. We work to address clinical management as well as community health worker performance and support. In all, we help provide services and support for: micronutrient supplementation, breastfeeding, complementary feeding, growth monitoring and promotion for children, nutrition screening and counseling, emergency and therapeutic nutrition, food fortification, and food-based dietary diversity.

Deficiencies in essential nutrients such as vitamin A, iron, folic acid (folate), zinc, and iodine can adversely impact physical and cognitive growth in children. In women, diet deficiency can cause life-threatening pregnancy complications and the delivery of low birth weight babies. Through the US Agency for International Development (USAID) Health Care Improvement Project (HCI) in Kenya, we are working with health facilities to purchase missing essential nutrients, such as iron and folate, and to include counseling on the need to take iron and folate tablets in antenatal care services. From February to July 2011, the number of mothers receiving folate during antenatal care rose 40%, while those receiving iron doubled. By November 2011, more than 80% of women received iron and folate supplements during antenatal care.

Immediate and exclusive breastfeeding is a cornerstone of nutrition and health for infants. We advocate for immediate and exclusive breastfeeding until the age of six months, followed by timely and adequate complementary feeding until two years of age—all part of the critical 1,000 day window of opportunity. We help promote and support optimal infant and young child-feeding practices in Benin, Cote d’Ivoire, Ethiopia, Guatemala, Haiti, Kenya, Lesotho, the Philippines, Sierra Leone, Tanzania, and Uganda, applying social and behavior change strategies in clinical and community settings. Our approaches help health workers understand the barriers to adopting optimal practices and promote knowledge that will allow mothers, caregivers, and other key influencers to understand the importance of nutrition. These approaches include tailored educational and counseling materials, reminder cards and checklists for health workers, and mentoring methods that strengthen community-based outreach. For example, the HCI project in El Salvador increased exclusive breastfeeding of newborns in participating clinics from 55% to 85% from May to October 2011 (Figure 1).

**Quality Improvement**

UCRC uses a variety of approaches to improve nutrition. The fundamental concept underlying the field of quality improvement (QI) is that a system left unchanged can only be expected to continue to produce the same results. QI approaches identify unnecessary, redundant, or missing parts of systems and improve quality by clarifying and/or simplifying procedures. QI methods emphasize changes in the systems delivering health care, rather than the provision of additional resources. Most changes focus on improving the implementation of high-impact, evidence-based interventions. QI methods can be applied in one facility or community, several, or at the health system level; interventions can focus on one or more clinical topics or support services.

**We provide services and support for:**

- Breastfeeding promotion
- Complementary feeding practices
- Nutritional screening and counseling
- Micronutrients: vitamin A and anemia programs
- Development and use of supplementary/therapeutic foods for acute malnutrition
- Assessment and treatment of severe acute malnutrition
- Food-based dietary diversity and links to food security and agriculture
services by developing sustainable links between community health workers and health facilities in community health systems. Leveraging existing community groups and resources, community members identify challenges and devise solutions, working in collaboration with facility representatives.

Malnutrition usually accompanies conflict, natural disaster, or other causes of food insecurity; among refugees and displaced populations, infants and children are particularly affected. In Niger, during the 2005–2006 food crisis, with support from the US Office of Foreign Disaster Assistance, CHS integrated the assessment and treatment of severe acute malnutrition into routine, public sector pediatric services and introduced nutritional rehabilitation centers into public health facilities. This led to a 50% reduction in malnutrition case fatality rates in the 15 participating hospitals: from 29% to 13%.

Developing Specialized Food Products

Specialized food products play an important role in delivering solutions for acute malnutrition—especially ready-to-use foods that allow for wider coverage and can be provided in the household setting. Attention to the programming protocols is also important in addressing acute malnutrition, or where safety net programs require supplemental feeding. URC-CHS has supported the commercial production and public sector programming of specialized food products, including product standardization and safety.

The relationship between nutrition and HIV is a vicious one: HIV infection can cause malnutrition and wasting, while poor nutrition can hasten the infection’s progression. URC provided technical assistance for nutrition for people living with HIV through the USAID Food and Nutrition Technical Assistance II (FANTA-II) project. In this program, URC helped to strengthen and improve nutrition care and support services provided at clinical and community HIV-care and treatment delivery points in Ethiopia. Also in Ethiopia, URC is working to ensure more-effective health and nutrition

Non-communicable Diseases and Nutrition: Reducing Diabetes Disparities

Many countries are now faced with a double burden of malnutrition—high undernutrition and rising obesity rates. Obesity is increasing at a faster rate in low- and middle-income countries than in developed ones, with associations with increasing rates of non-communicable diseases (NCDs) like heart disease and type II diabetes. CHS addresses the NCD and nutrition link in the United States, where diabetes disproportionately affects minority populations who are often less able to access the services they need. We provide nutrition classes, cooking demonstrations, and access to the local food bank to supplement other diabetes management support. Funded by the New Jersey Department of Health, the project serves African-American, Latino, and migrant and seasonal farm worker populations in Cumberland County.

Strategies for Success

- Use of data for learning, adaptation, and management
- Training events and coaching systems for sustained results at facility and community levels
- Operations and implementation research development and oversight, including evidence-based interventions and best practices
- Managing grants for in-country research and service delivery organizations
- Capacity strengthening of local organizations in planning, service delivery, and monitoring and evaluation

These system-based strategies have direct relevance to integrating nutrition in other contexts, for example, improving the effectiveness of existing agricultural extension agents and supervision systems and the coordination of services within nutrition value chains.
Partnering with locally owned Reco Industries, we helped produce more than 120 metric tons of ready-to-use therapeutic foods, certified for use by government and donors.

linking with farmers and commercial suppliers to create sustainable value chains, packaging, and social marketing for demand creation.

URC led one of the most successful local production start-ups for ready-to-use therapeutic foods (RUTF) through the USAID NuLife—Food and Nutrition Interventions for Uganda project. Partnering with locally owned Reco Industries, we helped produced more than 120 metric tons of RUTF, certified for use by government and donors. While creating the demand for RUTF at health facilities—marketing under the local name “Rutafa,” which means “will not die” in a local language—URC created capacity in the Ugandan private food industry to manufacture and distribute a high-quality RUTF made with locally available crops. Rutafa was licensed internationally by Nutriset as the primary food used in pre-famine and famine conditions as well as with malnourished HIV/AIDS patients. We successfully advocated for the inclusion of RUTF on the Essential Medicines List for Uganda, ensuring long-term demand and availability. URC is building on this success by working with Reco to expand their production and management capacity to sustainably produce a range of specialized food products while promoting food security.

Integrating Interventions to Achieve Scale

Integrating nutrition with other health care services can help to improve and institutionalize broad coverage. URC has successfully integrated nutrition into HIV and TB services as well as in community-based health and family planning programs. One successful approach for integration and scale-up uses collaborative improvement, which standardizes best practices through shared learning approaches, engagement of frontline workers in collecting and analyzing data, and the inclusion of all stakeholders in learning sessions.

For example, in Uganda, NuLife contributed significantly to comprehensive nutrition care and support for thousands of malnourished individuals infected with or affected by HIV/AIDS. The project engaged health workers in developing a seven-step process for providing good nutrition care, including assessing, at every visit, malnutrition with middle upper-arm circumference (MUAC) tape, a simple tool for determining nutritional status (Figure 2). Breaking down nutrition services into smaller steps allowed facilities to gradually introduce services and focus improvements on small, feasible increments.

Linking to Sustainable Livelihoods

Habit Obed, a Ugandan farmer and community volunteer, grows and sells groundnuts for the production of Rutafa. Under URC’s NuLife project, Reco Industries provided seeds and technical assistance for growing and producing groundnuts to more than 4000 farmers in the Kasese and Gulu districts. More than half of participating farmers are women, and one in five has HIV. In one region, a participating hospital referred individuals who have recently undergone treatment for malnourishment to participate as farmers in the program, preventing them from sliding back into food insecurity. Under a follow-on program, Production for Improved Nutrition, URC is working with Reco to expand the specialized food product line, increase significantly their sourcing from and support to small farmers, and promote home production of a variety of nutrient-dense foods.
As a result, staff in 54 facilities across the country improved the quality of nutrition counseling and interventions. From March 2009 to February 2011, facilities increased the percentage of HIV patients assessed for malnutrition at each visit from zero to nearly 100% (Figure 3).

From March 2009 to February 2011, Ugandan facilities increased the percentage of HIV patients assessed for malnutrition at each visit from zero to nearly 100%.

Through this holistic approach, district-level officers in the Ministry of Health (MOH) benefitted from training in coaching and supervision of the facility and community health workers. More than 800 community-based health workers countrywide can now ensure that those with malnutrition receive appropriate care. URC is now working to apply lessons learned from NuLife in Kenya. HCI is partnering with the Kenyan MOH to strengthen the integration of nutrition assessment, counseling, and support (NACS) into routine HIV care.

URC also developed a model to integrate QI approaches with NACS at the facility and community levels in Ethiopia, Cote d’Ivoire, Nigeria, and Zambia. We piloted and tested monitoring and evaluation tools to improve the quality of infant-feeding counseling and support and to improve the monitoring of infant-feeding practices by programs. Examples include a tool to monitor complementary feeding practices, a package of community-level program monitoring and supervision tools, and guides for conducting formative research on maternal nutrition and infant- and young child-feeding practices.

Figure 2: Seven-step Process for Providing Good Nutrition Care

- **Assessment**: All HIV-infected patients are assessed at each visit.
- **Categorization**: The nutrition status is recorded on the care card for each HIV-infected patient.
- **Counseling**: All malnourished patients receive counseling.
- **Food by Prescription**: All malnourished and severely malnourished patients who pass the appetite test receive RUTF.
- **Follow up**: All patients receiving RUTF receive follow-up.
- **Community Links**: Links are established between the facility and community.
- **Education**: All HIV-infected patients receive education on good nutrition and hygiene.

The steps in the blue box represent the components of care applied at facilities. Community links and education of all HIV-infected and -affected individuals are components that occur outside the facility to ensure that clients stay well nourished and can include community-based follow-up and links to sustainable livelihood programs and services.

Figure 3: Percentage of HIV Patients Assessed for Malnutrition at Each Visit Increases, 54 Facilities, Uganda, 2009-2011
URC’s experiences in translating nutrition-related policies and guidelines into practical, “do-able” steps are being adapted to new priority areas, such as the integration of nutrition into agricultural and food security programming.

In Guatemala, URC has provided more than a decade of support to community-based programs run by the Ministry of Health. From 2002 to 2005, we helped integrate growth monitoring and promotion into a large-scale health care coverage extension program; from 2009 to 2011, we helped integrate nutrition into a family planning program that increased the delivery of family planning services to men and women in the country’s most deprived areas. This greatly expanded access to health information and nutrition services to the country’s most vulnerable populations. Growth monitoring and promotion is one approach to child nutritional assessment and counseling, which involves tailored counseling on such topics as exclusive breastfeeding, complementary feeding, and hygiene. The program measured improvements in health workers’ demonstrated delivery of appropriate counseling to caregivers, which increased from less than 25% of the time to over 90% (Figure 4). Health workers in the 165 participating health facilities also organized group counseling sessions, demonstrations, and follow-up home visits for children needing further care.

Following on the program’s success, URC launched the USAID-funded Nutri-Salud project in July 2012. Targeting Guatemala’s western highlands region, Nutri-Salud focuses on improving the nutritional status of women and children, engaging communities in developing nutrition solutions, and strengthening maternal-newborn and child health and family planning services at the community level.

Translating Policy into Practice

Policies developed by the World Health Organization (WHO) and UNICEF over the last two decades provide a strong foundation for action to improve nutrition. Our job aids—educational tools for health/nutrition workers such as checklists, charts, counseling cards, and manuals—help translate national and international standards, policies, and guidelines into practical, “do-able” steps in both facilities and communities.

For example, in 2010, we partnered with UNICEF to develop The Community Infant and Young Child Feeding (IYCF) Counseling Package, an East Africa-focused package of community health worker training curricula, counseling job aids, and take-home materials on infant feeding. The package, which reflects the WHO Guidelines on HIV and Infant Feeding 2010, is a culmination of URC’s infant- and young child-feeding work with USAID, UNICEF, and CARE in several countries, including Benin, Kenya, Malawi, Tanzania, and Uganda.

As a partner on USAID’s Infant and Young Child Nutrition Project, URC helped strengthen counseling and support
services to improve the way mothers/caregivers feed their infants and young children, including in the context of HIV/AIDS. We helped develop generic counseling tools to guide facility and community workers in Haiti, Lesotho, and Sierra Leone in advising new mothers on how to feed their babies. Our materials contain images that attract intended users and reflect the relevant characteristics and behaviors of the target audience.

In Cambodia, we worked with the National Nutrition Program through the USAID-funded Better Health Services project to produce one television and two radio spots to promote the continued breastfeeding of children until at least the age of two. These spots complement both existing MOH campaigns on early and exclusive breastfeeding and a UNICEF campaign on complementary feeding of children aged six to 24 months. The project also provided technical support to the National Program on Nutrition to update the National Interim Guidelines for Management of Acute Malnutrition and develop a new clinical practice guideline for hospital treatment of malnutrition.

Conducting Research and Evaluation

A long-standing leader in data-driven approaches to achieving results and improving health and nutrition outcomes, URC uses a variety of research and evaluation methods. In addition to ensuring the highest standards of monitoring and evaluation, we conduct implementation research—the study and development of approaches to effectively and efficiently implement and scale up proven interventions.

For example, through the USAID Translating Research into Action project (TRAction), we are funding research to document the development and testing of a social marketing approach for distributing and promoting the use of a new supplementary food product for complementary feeding for infants and young children in Ghana. In Bangladesh, TRAction supports efforts that examine several questions regarding community-based maternal-newborn and child health and nutrition service delivery at the community level. In Mali, HCI assists the MOH in studying the causes of persistent maternal and child anemia. The results of this study will form the basis for advising the MOH on strategies and programs to strengthen interventions for decreasing the prevalence of this widespread problem.

Contributing to Institutional Capacity in Research

With USAID/Guatemala support, URC has conducted research to improve accuracy and effectiveness in growth-monitoring and promotion programs. URC has analyzed available data for the Guatemalan MOH, with reports such as, “Status and Trends of Malnutrition in Guatemala,” “Basis for Addressing the Situation of Chronic Malnutrition in Guatemala,” and “School Children Height Census to Monitor Chronic Malnutrition,” which have informed the development of national policies and program strategies. URC is also contributing to the prototype development of a malnutrition surveillance system to monitor chronic malnutrition in Guatemalan children under five; anemia in children under five, adolescent girls, and women 10–49 years of age; and overweight and obesity in women 10–49 years.
**About University Research Co., LLC—The Center for Human Services**

Established in 1965, URC is a global company dedicated to improving the quality of health care, social services, and health education worldwide. With its non-profit affiliate, the Center for Human Services (CHS), URC manages projects in more than 40 countries, including the United States. Based in Chevy Chase, Maryland, URC has a more than 850 employees worldwide.

*For more information about our work, please visit our website at [www.urc-chs.com](http://www.urc-chs.com).*

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**URC’s Technical Assistance for Food and Nutrition**

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<th>Country</th>
<th>IYCN</th>
<th>Maternal Nutrition</th>
<th>Nutrition and HIV/AIDS (e.g., NACS)</th>
<th>Breastfeeding</th>
<th>Complementary Feeding</th>
<th>Micronutrients and Anemia</th>
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