The theme for the Spring issue of The Digest is "Global Food Insecurity." According to the 2014 Global Nutrition Report, malnutrition affects one in two people on the planet. Of these, 165 million children under the age of five are estimated to be stunted (i.e., low height for age). Two billion people are estimated to be deficient in one or more micronutrients. Nearly 1.5 billion people are estimated to be overweight, and over 500 million to be obese. These conditions all have severe consequences for survival, for morbidity, and for the ability of individuals, the economy, and society to thrive.

In relation to the scale that these problems imply, the allocation for public resources to their prevention and amelioration is minuscule. Resources to specific nutrition programs amount to a small fraction of 1% of domestic or aid budgets.1

This topic appears to be timely and appropriate as there is a lot going on in this area. A recent Eat Right Weekly from the Academy highlighted a briefing that was held in support of global food insecurity efforts, and the first Global Nutrition Report was also recently released. The aims of the report are to empower nutrition champions at the international level to better inform policy decisions and to strengthen the case for increased resources.

Included in this issue are featured articles and information to bring awareness of global nutrition and practical implications and strategies to address global food insecurity. I encourage you to seize this opportunity to learn more in this area of work in the field of nutrition. One person can make a difference.

It is also time to think about renewing your membership in the PHCNPG! We have had a fruitful year and look forward to providing you with excellent benefits in the 2015-2016 membership year.

Thank you.

Bonnie J. Bradley, MPH, RD, LD
PHCNPG Chair, 2014-2015

References
Thinking About Whether to Renew Your PHCNPG Membership? 10 Reasons Why You Should!

The arrival of spring is always a time of great excitement. Warmer weather brings much needed relief from the winter blast. We are all on the edge of our seats following the action of March Madness (at least I am!). And we begin to wrap up the PHCNPG fiscal year and celebrate the many successes we have achieved.

Looking back on this year, we have made great strides to deliver benefits that are more valuable and more relevant to our members’ needs. We have a tremendous amount of momentum to build upon heading into 2015-2016, and we would like YOU to continue the journey with us!

Here are 10 reasons why you should:

1. You can hone your leadership skills. PHCNPG offers many opportunities to strengthen your leadership skills. Contribute to the newsletter, The Digest, or volunteer at FNCE® or on one of the committees.
2. There are many award opportunities, and you or someone you know could be nominated. PHCNPG recognize the outstanding accomplishments of our members. Nominate yourself or one of your colleagues for one of our several awards and scholarships!
3. PHCNPG is loaded with professional resources. With a robust and growing library of professional practice resources, PHCNPG provides you with materials for nutrition professionals, researchers, and consumers and patients.
4. PHCNPG connects with members on multiple platforms. From the website (www.phcnpg.org) to Facebook and Twitter, PHCNPG communicates through multiple avenues to keep you updated.
5. You can network with other professionals in public health and community nutrition. Get in touch with other RDs and student members through the Member Directory. Or join existing conversations or start your own on the newly revamped Electronic Mailing List (EML)! The EML allows you to network, ask questions, and discuss relevant professional issues with your colleagues (to join, send an email to phcnpg.communications@gmail.com).
6. Students have more opportunities than ever to get involved. PHCNPG recognizes that the students of today will be the future public health and community leaders of tomorrow. The practice group has launched several new student opportunities, including a Student Committee, FNCE® volunteer activities (see Student Stipend program), and The Student Digest newsletter.
7. If you are going to FNCE®, PHCNPG will see you there! PHCNPG is active and visible at FNCE®. Connect with your fellow practice group members at the networking reception or visit PHCNPG at the DPG showcase. Look for PHCNPG-sponsored sessions in the program!
8. PHCNPG keeps you informed with weekly policy updates. PHCNPG is your source for the latest information on hot topics in nutrition policy and advocacy that affect your public health and community programs.
9. Dietetic Practice Groups like PHCNPG are a great place to expand your interests and grow your career. Whether you’re a seasoned veteran in public health or community nutrition, or contemplating a career change, or just want to be more informed on the issues, PHCNPG is the place to be. From newsletter CEU opportunities to cutting-edge webinars, PHCNPG delivers information on your interests.
10. You could be featured! Every month, PHCNPG features a Member Spotlight showcasing the amazing work our members are doing in public health/community nutrition, their communities, the Academy, and our profession.

With all of these opportunities available, it is an exciting time to be a PHCNPG member! I hope you will consider renewing your membership for 2015-2016, and we’ve made it easy for you to do so by going to http://www.phcnpg.org/page/join-phcnpg. Also, take the PHCNPG Newsletter Committee Survey for a chance to win a FREE membership (you can still win even if you have already renewed). I look forward to your continued involvement.

Thank you,

Jason Pelzel, MPH, RD
PHCNPG Membership Committee Chair, 2014-2015
jason.pelzel@gmail.com

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PHCNPG Wants to Hear from YOU!

Your Chance to Win a FREE Membership to PHCNPG

The PHCNPG Newsletter Committee wants to hear from you. How can we improve the newsletter? What topics are of interest to you? Want more CPE opportunities? Tell us your thoughts.

Complete the following 10-question survey for a chance to win FREE membership in PHCNPG for the 2015-2016 membership year.

Take the Survey

Complete the survey by March 31st for your chance to win. Already renewed your membership? You can still win!
Message from the Student Committee Chair

Hello PHCNPG Student Members!

As future public health and community nutrition professionals, it is our duty to keep up to date with global health and nutrition trends and issues. The scope of impact of our selected area of practice will allow us to work with populations at all levels, from our local communities to international collaborations that could positively affect thousands of people. The release of the 2014 Global Nutrition Report has comprehensive narrative and analysis on the state of the world’s nutrition. This is the first in an annual series that will track progress in improving the nutrition status of the world. By keeping ourselves informed, we may identify opportunities for action to work for. Download the 2014 Global Nutrition Report here.

Many opportunities for students to get involved in global health and nutrition are available. There is a wide selection of programs to choose from. The first step towards deciding what kind of program will be best for you is to determine the amount of time you are willing to commit to a project. For short-term projects, the best option would be summer internship programs in public health such as the Minority Health & Health Disparities International Research Training (MHIRT). The MHIRT is short-term international research training opportunities for undergraduate and graduate students from health disparity backgrounds. Be on the lookout for other short-term programs on the Center for Disease Control and Prevention webpage. Look under resources for the 2015 Student Opportunities in Public Health.

For more long-term experiences in global nutrition, there are options like the Peace Corps Master’s International program and dietetic internships abroad. Peace Corps Master’s International is a program that allows you to both pursue a higher degree in public health and volunteer for the Peace Corps at one of more than 80 U.S. academic institutions. Some dietetic internship programs incorporate international experiences, such as the Iowa State University International Dietetic Internship which allows 5 to 10 dietetics interns to experience the nutrition care process in a rural underserved international setting.

Another alternative to earn useful skills to manage global nutrition issues is to pursue the Food Insecurity/Food Banking Dietetic Internship concentration to be available by the Fall of 2015. For more information, refer to the “Future of Food Fact Sheet” on the Academy Foundation’s Future of Food Initiative website. Making a positive impact on the world is one of the most fulfilling aspirations as a health professional. Be sure to know your options to learn how you can make a difference!

Best regards,

Mayra S. Crespo, BS
PHCNPG Student Committee Chair, 2014-2015

Message from the Delegate

HOD Virtual Meeting: Spring 2015

This Spring, the House of Delegates will be discussing malnutrition as the mega-issue and the Academy’s Corporate Sponsorship program as a current member issue.

Please read the following materials related to HOD Mega-Issue, malnutrition located on the PHNCPG website:

1. Malnutrition Backgrounder
2. Malnutrition Executive Summary
3. Malnutrition Fact Sheet

Be a voice for Public Health/Community Nutrition and share your input on:

- how we empower RDNs to be experts and leaders in the management of malnutrition
- the Academy’s Corporate Sponsorship program

Anonymously provide your thoughts on these issues by clicking here. Your input is greatly appreciated.

Shannon Robson, PhD, MPH, RD
PHCNPG Delegate
shannon.robson@cchmc.org
**The Future of Food Initiative**

The Academy Foundation’s *Future of Food Initiative* is an education, communications, and research initiative addressing domestic and global food and nutrition security, and consumers’ interest in a safe and healthy food supply. The initiative engages agriculture, nutrition, and health and hunger relief professionals in a dynamic collaboration to increase awareness on these topics, promote access to healthy food to those experiencing food insecurity, and provide quality educational opportunities for Academy members.

Learn more! A series of 12 *Future of Food* webinars featuring experts in food insecurity, agriculture, and healthy food systems are being offered by the Academy Foundation. The webinars are designed to increase Academy members’ knowledge, awareness, and confidence in taking action in their own communities. Webinars that have already aired are available to view under “webinars” at: http://www.eatrightfoundation.org/Foundation/content.aspx?id=6442484072

**NEW!**

A new member toolkit, *Smart Choices. For a Healthy Planet*, with a free downloadable PowerPoint presentation and handout is available for Academy members at: www.kidseatright.org/volunteer. Mini-grants for delivering two presentations from the toolkit are also available at: http://www.eatrightfoundation.org/foundation/kergrants/.

**Global Food Insecurity**
The U.S. Government’s Role in Fighting Global Hunger and Food Insecurity: Feed the Future

Judy Klavens-Giunta, RDN
PHCNPG Policy and Advocacy Leader

The Growth of Global Food Insecurity
Between 2007 and 2008, the cost of food increased dramatically, the largest increase in decades. Factors that drove the increase in the cost of food include a rise in the cost of grain due to high demand and diminishing supplies, as well as a rise in the use of grain for bio fuel. Oil prices continued to climb affecting resource intensive food sources adding even more to the cost of food.1 The lack and increasing cost of food led to political and social instability in many poor and developing nations in Africa, Asia, the Middle East, Latin America, and the Caribbean.2 Global food insecurity grew tremendously, threatening progress toward meeting the Millennial Development Goals which were established in 2000 by members of the United Nations. The Millennial Development Goals commit member nations to a global partnership to reduce extreme poverty and set out a series of time-bound targets—with a deadline of 2015.3

The Response of Global Leaders
In his 2009 Inaugural speech, President Obama promised to work with poor nations to help improve farming, water sanitation, and address hunger.4 A group of eight advanced economic countries, known as G8, held a summit in L’Aquila, Italy, in July 2009. President Obama took the lead in urging world leaders to work together toward reducing global poverty and food insecurity by increasing agricultural research to improve agricultural productivity.2, 4 To that end, President Obama pledged $3.5 million dollars in United States’ aid, which led to G8 members and others to pledge an additional $18.5 million dollars.5

In 2010, the G8 agreed to use the funds based on the development of the Rome Principles created at the November 2009 Food and Agricultural Organization (FAO) meeting in Rome. These principles laid the groundwork for a new way to supply aid to developing countries. The Rome Principles included: supplying aid designed to meet the needs of individual countries, coordinating resources of donors/stakeholders and leading, with an approach that includes agricultural growth to improve nutrition while also bridging humanitarian relief and sustainable development efforts.6, 7

The Creation of the U.S. Feed the Future Initiative
The United States’ pledge by President Obama at the 2009 G8 meeting was the first step in creating the U.S. government’s Feed the Future initiative which was guided by the Rome Principles. In May 2010, Feed the Future (FTF) was launched by the U.S. Department of State and administered by the U.S. Agency for International Development (USAID). FTF collaborates and uses the resources of multiple existing government agencies, some that target food and self-sufficiency. These agencies include the U.S. Department of Agriculture and the Peace Corps. FTF also collaborates with multilateral organizations as well as various other agencies and organizations.8

“Hunger reduction requires an integrated approach, and needs to include: public and private investments to raise agricultural productivity; better access to inputs, land, services, technologies and markets; measures to promote rural development; social protection for the most vulnerable, including strengthening their resilience to conflicts and natural disasters; and specific nutrition programmes, particularly to address micronutrient deficiencies in mothers and children under five.”9

FTF recognizes that nutrition is vital to the health and well-being of all.

FTF’s focus on agriculture helps promote economic and social stability. Improving the lives of the program’s recipients is achieved by increasing harvests and farmers’ incomes, leading the way to a boost in economic growth, and trade. In this way, FTF lays the groundwork necessary to avoid the cycle of repeated crisis and supply the tools to rebound if there is a crisis. The initiative’s goal is to target aid leading to a reduction in poverty and food insecurity by 20%.3

Feed the Future’s Focus on Women and Children
A lack of healthy food choices perpetuates the cycle of poverty and hunger, leading to poor health, lower levels of educational attainment, reduced productivity, and lower wages in adulthood.9 Women and children are often hardest hit by economic downturns and social unrest.10 FTF’s focus on assisting small-holder women farmers’ productivity can lead to improved growth in children and increase the women’s ability to weather any crisis.

To this end, FTF has incorporated the use of the Women’s Empowerment Agricultural Index (WEAI) implemented in 2012. The WEAI measures women’s involvement in agriculture as independent and productive farmers. The WEAI gauges how involved and how much control women have over agriculture as independent and productive farmers. The WEAI measures women’s involvement in agriculture as independent and productive farmers. The WEAI gauges how involved and how much control women have over resources, production, income, and what level of community leadership they hold especially compared to the men in the community.10 FTF monitors the WEAI for the programs it has implemented. Based on the data FTF gathers, they can determine what strategies are effective.11

A New Alliance is Formed
The Obama presidency continues to push the agenda it started with the creation of FTF. In 2010, President Obama issued the Presidential Policy Directive on Global Development. This directive recognizes that economic development of all countries is in the best interest of the national security, and is part of the moral values of the United States.12 In May 2012, along with African heads of State, the Obama administration

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launched the New Alliance for Food Security (NA) which continues and adds on to the original G8 policies. The NA is a shared commitment to achieve sustained and inclusive agricultural growth with a plan to raise 50 million people out of poverty over the next 10 years. FTF is the tool the United States uses as a way to participate in this alliance. Additional partners to the alliance are members of the private sector.13

This NA has been a strong partner with FTF and has added to its ability to make great strides in reaching the Millennial Goals of 2015 to reduce food insecurity by 50%.15 In its 2014 progress report, FTF reported that in 2013, the initiative had nutrition interventions impacting more than 12.5 million children; introduced new food production practices to nearly 7 million farmers and food producers farming almost 10 million acres of land; and raised approximately $160 million private sector investments, an increase of 40% from the previous year.14, 15

Current Status of Feed the Future

In September 2014, during the 113th Congress, a bipartisan bill was introduced in both houses of Congress that aimed to create a federal law to support FTF’s impact on agricultural growth. Unfortunately, although the Feed the Future Global Food Security Act of 2014 (HR 5656) was unanimously passed in the House by voice vote in December 2014, the Senate was unable to vote on this bill before they adjourned.16 Since there is strong bipartisan and bicameral support for this bill, it will most likely be reintroduced in the 114th Congress.17

There is no doubt that President Obama’s call to action and pledge which led to the creation of FTF in 2009 at the G8 summit, helped play a part in the reduction of global food insecurity. Based on the latest FAO data, there are approximately 100 million fewer cases of chronic undernourishment in the last decade. Stated as a percent, chronic undernourishment has been reduced globally by 7.4% and 9.9% in developing countries.18 With the continued work of FTF, the NA, G8 leaders, private sector donors, and the research community, there is hope of continued reduction in global poverty, food insecurity and economic instability.

References

Did You Know—Academy’s Efforts in Domestic Food & Nutrition Security

A Food and Nutrition Security Task Force was formed following the Spring 2013 House of Delegates (HOD) Virtual Meeting dialogue on food and nutrition insecurity. The Task Force was appointed and began meeting in September 2013. The Task Force began creating a Food and Nutrition Security Action Plan, which was approved by the HOD Leadership Team in May 2014 and shared with the HOD. The action plan is managed by the newly formed Public Health/ Community Nutrition Committee of the Academy. The action plan can be found on the PHCNPG HOD 2014 – 2015 webpage or on the Academy’s HOD website.

Food Security and Nutrition Policy in Brazil

Kathleen Cullinen, PhD, RD

Brazil, officially known as the Federative Republic of Brazil, is the world’s fifth largest country both by geographical area and by population, and is the largest country in both South America and the Latin American region. After 20 years of military dictatorship, Brazil has experienced intense societal mobilization since the mid-1980s that has been characterized by proposals to deal with social issues, including food and nutrition.1 In 1999, the Brazilian National Health Policy was expanded to include a National Food and Nutrition Policy that has since contributed to the universal human right to adequate food and nutrition.2 However, the greatest progress made in food security and nutrition governance has occurred over the course of the last 10 years. In 2003, President Luiz Inácio Lula da Silva introduced Fome Zero (Zero Hunger), a comprehensive strategy with the goal of eradicating hunger and extreme poverty. This flagship initiative placed food security and nutrition, and social inclusion at the center of the government’s agenda, while linking macroeconomic, social, and agricultural policies. Between 2000-2002 and 2004-2006, Brazil’s undernourishment rate fell by half from 10.7% to below 5%. In fact, Brazil has achieved both the United Nations’ Millennium Development Goal of halving the proportion of its people who suffer from hunger, as well as the World Food Summit target of reducing by half the absolute number of hungry people.3

Through 31 programs and initiatives, Fome Zero prioritizes greater food access, but also includes components for strengthening family agriculture, income generation, and promoting partnerships with the private sector and civil society. Fome Zero is a strategy of the Brazilian Government to ensure the human right to adequate food, to people having difficulty in accessing it. This strategy is embedded in the promotion of food and nutrition security with social inclusion and citizenship rights for the population most vulnerable to hunger.

Launched in 1955, Brazil’s National School Meals Program (PNAE) is one the oldest food and nutrition programs in the country, and one of the largest school meal programs in the world.7 From a regional humanitarian campaign based on international donations in 1955, PNAE evolved into a universal, public school enrollment-based program executed as a direct resource transfer from central government to all 26 Brazilian states and 5,570 municipalities responsible for its implementation by 1994.

Over time, PNAE has been redesigned as part of Brazil’s comprehensive food and nutrition security approach. It is an example of the integration of education, agriculture, health, and social protection to promote access to healthy diets at school while strengthening local family farming. School feeding is the responsibility of the National Fund for Development of Education (FNDE), which is linked to the Ministry of Education. The FNDE Resolution no. 33/2009 sets the administrative rules and technical standards for implementing Law 11.947 or the School Feeding Law of 2009.8 To help address a common concern regarding the nutritional quality of school meals, the Resolution increased the proportion of daily nutritional needs to be covered by school meals (e.g., at least 20% of the daily nutritional needs of students enrolled in part-time basic education when one meal is offered; and at least 30% of the daily nutritional needs when two or more meals are offered, and in schools located in indigenous communities and quilombos, or communities founded by people of African origins, who often were escaped slaves). The Resolution also: 1) sets standards on menu composition; 2) restricts processed foods with high levels of sodium and saturated fats; 3) forbids procurement of soft drinks with FNDE funds; 4) states that schools should promote and ensure the inclusion of food and nutrition education in the teaching and learning process; and 5) requires participating schools to hire or contract with a professional nutritionist to sign off on menus in line with nutritional standards.9

Another key provision in the School Feeding Law of 2009 is that 30% of the program budget must be used to purchase foods directly from family farms and their cooperatives.10 This strategy has the dual purpose of supporting family farming by connecting farmers with a secured market with pre-negotiated prices, as well as increasing the amount of local, fresh products available in school meals. In line with Fome Zero, Lula’s overarching, comprehensive strategy to eliminate hunger and extreme poverty, expression of views on school feeding and active participation by diverse civil society
The Digest—

From 2001 to 2012, the income of the poorest percent grew 3.5% between 2001 and 2012. From 2001 to 2012, the income of the poorest 20% of the population grew three times as much as that of the wealthiest 20% from 2001 to 2012.

With a total population of 200.4 million (2013), Brazil currently provides cash benefits to 13.8 million low-income families, and free school meals to more than 43 million children enrolled in public schools via Bolsa Família and PNAE, respectively.11 In 2011, the inclusive development model of Fome Zero was incorporated into Brasil sem Miséria (Brazil without Extreme Poverty), a program launched by Dilma Vana Rousseff, the current and first female President of Brazil, and the previous Chief of Staff of President Lula from 2005 to 2010. What began as a government pledge to end hunger was transformed over the course of a decade to national law, and ultimately protected in 2010 through the Constitution of Brazil in which access to food was declared a social right. Brasil sem Miséria continues to tackle the different dimensions of poverty with a strong focus on social justice and dignity for the most deprived groups in the population. The foundations of Brasil sem Miséria include: 1) Promoting social development by integrating an excluded population fully into Brazil’s economic and social dynamics; 2) Promoting equity by reducing the poverty gaps faced by black, indigenous, and traditional populations; 3) Generating opportunities with human capital development that considers life cycle, gender, place of residence (urban or rural), and cultural context; 4) Improving quality in the current model with a focus on the lack of access to quality public services by the extremely poor; and 5) Developing a sustainable policy that addresses the internal and external factors that were identified while developing the model.12 Brasil sem Miséria aims to align policies both horizontally and vertically with the goal of making service provision more efficient, effective, and comprehensive than the strategy of its predecessor, Fome Zero.

The combined efforts of Fome Zero and Brasil sem Miséria were instrumental for Brazil in meeting internationally established goals. Poverty fell from 24.3% to 8.4%,13 while extreme poverty dropped from 14.0% to 3.5% between 2001 and 2012.14 From 2001 to 2012, the income of the poorest 20% of the population grew three times as much as that of the wealthiest 20% from 2001 to 2012 (Figure 1, inflation-adjusted).15

A national survey that included the Brazilian Household Food Insecurity Scale, based on the food insecurity scale developed by the U.S. Department of Agriculture (i.e., mild, moderate, or severe food insecurity), showed a 25% decrease in severe food insecurity from 2004 to 2009.16 Among people living in extreme poverty, the decrease in food insecurity was greater. While federal spending on food security and nutrition programs totaled approximately U.S. $35 billion (100 billion Reais) in 2013, spending on social programs increased 128% from 2000 to 2012, as the share of these programs increased in gross national product by 31%.17

Although Brazil’s food security and nutrition policies cannot account for all of the progress made in reducing inequality over the course of the last decade (i.e., job growth, increases in minimum wages, higher pension payments), they have clearly contributed by increasing the income of the poorest families in the country. Brazil continues to face challenges on its journey towards food security. Some challenges include:18

1) the intergenerational transmission of poverty in the absence of increasing human capital through education and health; 2) the lack of information and knowledge among small-scale farmers for them to take full advantage of recent government agricultural programs; 3) the lack of appropriate training and education in food and nutrition security among potential representatives from civil society; 4) the local patronage and corruption preventing effective participatory governance in many municipalities; and 5) the socio-economic and regional disparities in access to resources, public goods, and services.

However, with an integrated, multisectoral approach towards national food security and improved nutrition, and active participation by civil society, Brazil has made very great strides and identified challenges and lessons learned that could most certainly be of benefit to the new world of global public health policy and practice.

About the Author

Kathleen Cullinen serves as the Director of Network Programs at the Michigan Fitness Foundation where she oversees its Supplemental Nutrition Assistance Program–Education (SNAP-Ed) programming goals and objectives relating to improving nutrition and physical activity in low-income income populations. A registered dietitian with 25 years of experience in public health nutrition, Kathleen has recently taken a lead role in evaluating national policy, system, and environmental (PSE) approaches in SNAP-Ed. She has a special interest in global public health nutrition and is conducting PSE assessment work in low-income public schools in the states of Ceará and Paraíba of Northeast Brazil.

References

Malnutrition Among Children in Sudan

Ahlam Badreldin El Shikieri, PhD, MBA
Nada Omer

A Global Look at Pediatric Malnutrition

Of all population groups, children are most seriously affected by malnutrition. Globally, 9% of children are malnourished and 54% of deaths for children under the age of five occur because of malnutrition. Protein-energy malnutrition (PEM), especially among children, is most prevalent in Africa, Central America, South America, the Middle East, and East and South East Asia. According to the 2005 estimates from the Food and Agricultural Organization of the United Nations (FAO), 20% of children younger than 5 years in low-income and middle-income countries were underweight, with higher prevalence in south-central Asia and eastern Africa (33% and 28%, respectively). Additionally, for all developing countries, an estimated 32% (178 million) of children younger than 5 years had stunted growth. Eastern and middle Africa have the highest prevalence with 50% and 42% respectively; the largest number of children affected by stunting (74 million) live in south-central Asia.

The Consequences of Malnutrition

A hungry, malnourished child may have mild to serious learning disabilities resulting in poor school performance, illness, and even death. Thus, malnutrition may undermine investments in education, health and other development sectors.

Determining Nutritional Status

The assessment of nutritional status among the pediatric population is useful in estimating the growth patterns and identifying signs and symptoms associated with undernutrition or excessive nutritional intake. Nutritional assessment detects abnormalities earlier, and adverse consequences can be handled promptly. Moreover, a meaningful assessment depends on both accurate information and careful interpretation of each finding in relation to the standards.

Malnutrition in Sudanese Children

Dr. El Shikieri and her research team have been conducting research over the past six years to assess the nutritional status of children in Khartoum state, the capital of Sudan. Sudan, Africa, is classified as both a least developed and low-income food-deficit country. In one community-based study in Sudan, 56.1% children were malnourished, of these 30.9%, 13.1%, and 12.8% were mildly, moderately, and severely malnourished, respectively. Several studies reported that the prevalence of stunting, underweight, and wasting were higher among rural than urban children.

Malnutrition in Hospitalized Sudanese Children

According to Dr. El Shikieri, “Few studies have been conducted in a clinical setting, and several researchers were focusing mainly on assessing the nutritional status of...”
freely living children. Dr. El Shikieri’s research team recently conducted a study in the Khartoum state. The study included the three states which are Khartoum, Khartoum North, and Omdurman states. All children’s hospitals were approached, and the study population was recruited from those who gave their consent.

A total of 100 children between the ages of 0 and 5 years were enrolled in the study. The children were screened and were not suffering from diseases such as cerebral palsy, tuberculosis, meningitis, human immunodeficiency virus (HIV/AIDS), mental retardation, common cold, malaria, or cleft lip. Anthropometric measurements were taken and parents completed a questionnaire about demographic information. Results showed that all children had severely stunted growth. Figures 1 shows the nutrition status of the Sudanese children as compared with the World Health Organization (WHO) growth charts. The figure illustrates weight-for-length/height for children under 5, and all analyses showed similar trends compared with WHO standards (e.g., weight-for-age, length/height-for age, BMI-for-age).

Conclusions of Dr. El Shikieri’s Current Research
According to Dr. El Shikieri and her team, the effective ways of treating malnutrition in this population group have remained elusive. Now may be an appropriate time to question strategies around malnutrition and nutrition supplementation in relation to food security and sustainable access to food in vulnerable households.

Next Steps in Approaching Malnutrition
The underlying causes of chronic malnutrition are multifaceted, and to improve nutrition sustainably, simultaneous action may be required in many areas. In many cases, poverty and restricted access to food are the underlying causes of malnutrition. In many developing countries, the low-energy density of weaning foods (foods introduced when an infant is weaned from breast milk) is a major contributor to growth faltering and malnutrition. Although weaning diets may be adequate when children are healthy, they fail to allow rapid catch-up growth after diarrhea and other infections. The pursuit of household food security must start, therefore, in making food more accessible to the poor. This can be achieved by increasing: 1) food production and availability; 2) increasing incomes and ownership of assets; or 3) by providing a safety-net of social security for the needy. Promotion of small-scale community-based agriculture and food processing is central to improving household food security among the rural poor. It offers increased food, employment, and income. It is necessary to attempt as early in life as possible for a high-quality diet with optimal levels of food and nutrients to help maintain optimal health and prevent malnutrition.

About the Author
Ahlam Badreldin El Shikieri is a PHCNPG member, and works as an Associate Professor and Consultant Nutritionist at Taibah University in Al Madinah Al Manuawarah, Saudi Arabia. Nada Omer is a Clinical Nutritionist at the Ribat Teaching Hospital in Khartoum, Sudan.

References
Sandy Procter, PhD, RD, LD

Sandy Procter serves as a volunteer member of Kansas to Kenya, or K2K. She has visited the Rift Valley region of Kenya for about 10 days each summer for the past seven years (since 2008). Sandy provides nutrition education to women’s groups as part of a community team, and she often speaks through an interpreter to patients waiting to be seen by members of the medical team. Many patients are referred by visiting the dentists and physicians to have diet consultations with Sandy. Watch a video of Sandy’s work with nutritional programs through the K2K program!

Sandy is a PHCNPG member. She is an Assistant Professor in the Department of Human Nutrition at Kansas State University, and serves as the Expanded Food and Nutrition Education Program (EFNEP) Coordinator and an Extension Specialist through the K-State Research Extension.

Katy Connolly, MPH, RD, LD

Katy Connolly is a dietitian with the Refugee Health Program of Heartland Health Outreach, based in Chicago, IL. She spent January of 2015 in Guatemala working with Primeros Pasos, an organization/clinic that runs a Nutrition Recuperation Project in the rural areas of Quetzaltenango, Guatemala.

At the beginning of each calendar year, women and children from local villages are recruited to take part in the yearlong program, which aims to provide nutrition and health education and support that can help fight malnourishment. Some of the challenges that families face include lack of clean running water, living miles away from any market or grocery store, and extreme poverty. Many children are malnourished due to lack of variety in diet, or are prone to parasites because of lack of clean water.

Throughout the year, the women and children take part in cooking presentations, hygiene demonstrations, and anthropometric screenings, and they receive supplemental food assistance from the clinic. One main food item they receive is Protemás, which is a powdered protein supplement that can be added to almost any food they make. Additionally, the organization has worked with Habitat for Humanity to provide some homes with water filters, stoves for cooking, and garden plots so that families can grow their own fruits and vegetables in order to increase variety and availability.

During Katy’s service with the program, she accompanied the nutrition director on trips to villages and assisted with initial anthropometric measurements, educational presentations, and home visits.

Alice Lenihan, MPH, RD, LDN

Alice Lenihan is a PHCNPG member and serves as a Global Clinical Advisor for Special Olympics, Inc. In this role, she works with a variety of health professionals in the U.S. and around the world on health promotion programming, which centers on nutrition. Alice also works with a small group in the American Overseas Dietetic Association (AODA), the International Affiliate of the Academy of Nutrition and Dietetics, on Kids Eat Right International.

Mary Pittaway, MS, RD

Mary Pittaway, an Academy of Nutrition and Dietetics member, serves as a Global Clinical Advisor for Special Olympics, Inc. Mary also works with a variety of health professionals in the U.S. and the world on health promotion programming. Mary’s area of concentration is bone health and osteoporosis prevention.

With 7,000 athletes and 3,000 coaches representing 177 countries, along with 30,000 volunteers and 500,000 anticipated spectators, the 2015 Special Olympics World Games will be the largest sports and humanitarian event anywhere in the world this year. Apply now to be a part of this event as a Healthy Athletes, Health Promotion volunteer. As a Health Promotion volunteer you will be assessing health behaviors and providing education to Special Olympics athletes, families and coaches.


For more information on the Health Promotion Program check out the Global Fact Sheet at http://media.specialolympics.org/soi/files/resources/HABranding/HA_HealthPromotionGlobalFactSheet.pdf.
The severity of childhood malnutrition in the world today remains a global crises. Approximately one-third of child deaths, or 3.5 million children under the age of five, die each year due to undernourishment. This highlights the importance of proper nutrition in the fight of preventable death in children. Furthermore, health experts make it clear that the golden period of intervention for nutrition is between pregnancy and 24 months.

This evidence supports the critical responsibility of registered dietitians and health professionals as a whole to bring forth early nutrition education for improved health outcomes of children. Therefore, when given the opportunity to join the International Health Emissaries (IHE), a nonprofit organization dedicated to bringing medical services such as dental work to underprivileged populations around the world, on their medical journey to Guatemala in November 2013, it was our duty as dietetic graduate students to help provide knowledge of early childhood nutrition to the women and children of the region in order to promote healthy growth and development. In fact, Guatemala has the highest rate of malnutrition in the Western hemisphere: an estimated 48% of children suffer from stunted growth and, in rural Mayan villages, this estimate can be as high as 80%. In 2012, the World Health Assembly Resolution for 2025 declared the first target is a 40% reduction in children under the age of five who suffer from stunting growth due to malnutrition.

Extending our knowledge to individuals and families in underserved communities or populations with limited access to essential nutritional information is something we are passionate about. Once we arrived in Guatemala and reached the villages along the Rio Dulce with the IHE, we practiced the same doctrines that have shaped our profession while supporting the efforts of IHE. Through the leadership of Dr. Terri Lisagor, a Nutrition and Dietetics professor at California State University Northridge (CSUN), and a team of volunteer dentists, our group was able to participate in providing nutrition education and lactation counseling to indigenous families that have limited or no access to health related services. In collaboration with a team of dentists who volunteer their services to IHE, we were able to take the opportunity to expand on those services and to provide, for the first time, nutrition education and lactation education to surrounding villages. Prior to this, nutrition education was typically only provided in the clinics. In total, over an 8-day period, we served 11 villages consisting of approximately 200 mothers and over 300 children.

We spent eight days providing nutrition and dental hygiene education to the villages. The work was demanding but our time flew by so quickly because we were having an amazing time teaching. Each day we would travel by boat to our designated villages, where the families greeted us with warmth. To make our lessons engaging and interactive, we used food models and actual samples of common foods eaten in Guatemala, asked our audience questions, and role-played. Our nutrition education lesson utilized MyPlate, a wonderful tool that transcends language barriers due to its clear visual display of food groups. With this method, we discussed and emphasized balance, moderation, variety, and exercise, as well as educated the families on healthy food choices from the different food groups, paying special attention to discussing culturally appropriate foods. The lactation education focused on prevention of nursing caries since many mothers were unaware of the sugar content of breast milk and the importance of wiping the gums of the infant even if they did not have any teeth developed yet. The dental hygiene component of this project consisted of teaching mothers and children how to brush their teeth by singing a short song called “Circulitos (Little circles),” composed by Dr. Lisagor, and having the families sing along. The translated verses of the song read “Little circles, little circles, little circles, goodbye monsters.” The monsters, we told them, are the bacteria in the mouth that cause caries. After discussing how to brush teeth, we would role-play with families how to apply fluoride on the teeth of their children. The families seemed to enjoy this as they often giggled.

The families were very appreciative of the education they received. Many expressed thanks and many asked questions during our
lessons. At the end of each session, we asked the mothers what they had learned, and many could recall very important pieces of information we had discussed. That was very satisfying.

Our experience was very fulfilling in that it allowed us to reach out to this population in need of these services and allowed us to witness first hand what a day in the life of these mothers and children consisted of. These observations helped shape our nutrition educational approach to provide culturally relevant information to not only the mothers, but to the future, their children.

Now as registered dietitians, we whole-heartedly believe in the importance of helping our communities that lack knowledge related to nutrition and dental hygiene, and vow to deliver our services, domestically or internationally. Helping one another live strong, healthier lives is our bottom line. With that being said, we end with a wonderful quote by Gabriela Mistral, who sums up our feelings beautifully.

"We are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the foundation of life. Many of the things we need can wait. The child cannot. Right now is the time his bones are being formed, his blood is being made and his senses are being developed. To him we cannot answer 'Tomorrow'. His name is 'Today.'"
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Photo courtesy of PHCNPG student member, Wenbo Zhao.

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