**Testimony of Carolyn Wetzel Chen, MPH & TM, RN**
**Chief Grant Development Officer**
**Food for the Hungry**

**Congressional Hearing: The First One Thousand Days of Life – Development Aid Programs to Bolster Health and Nutrition**

**House Committee on Foreign Affairs**
**Subcommittee on Africa, Global Health, Global Human Rights, and International Organizations**
**Rayburn House Office Building**

**25 March 2014**

Let me begin by thanking Chairman Smith and Ranking Member Bass for holding this important hearing and giving me the chance to testify about an issue on which the lives of millions stand in the balance. I am here today as a nurse, as a community health worker, as a Christian and the designer and implementer of USG funded programs that have allowed children, who would have otherwise died, to live.

## I. An introduction to Food for the Hungry

I am speaking on behalf of Food for the Hungry, a global poverty solutions partner that helps the world's most vulnerable children and communities thrive. FH has developed highly innovative, comprehensive and sustainable interventions and approaches, while being nimble enough to respond rapidly to changing environments. FH tackles the root causes of problems to effect lasting change. We are proud to often work ourselves out of job as communities we've partnered with exchange poverty producing mindsets and behaviors for healthy perspectives and actions.

Food for the Hungry has implemented relief and development programs in over 20 countries since 1971. We are a faith-based NGO. Currently about half our funding comes from individual child sponsors, churches and private donors and half from governments and multinational donors. Of the nearly 2,000 employees of Food for the Hungry worldwide, 97% are nationals of the country where they work and most are motivated by their Christian faith. FH works closely and contextually with indigenous faith and community leadership, often providing leadership opportunities to those who have never before had a voice. We walk with communities to understand how their faith, their values and perspective on humankind, on history and the future connect with the promotion of maternal and child health practices and behaviors. Building on a community's intrinsic motivation, often inspired by faith, is a key component to the sustainability of our work.

## II. The importance of faith based organizations in addressing the 1,000 day window

In 2011, 78 of the largest US faith-based international development organizations invested more than $5 billion in funds from private sources to meet the needs of those living in extreme poverty. In the developing world, it is estimated that faith-based organizations provide between 25 and 75 percent of the health care services (depending on the country). On average, faith-

based organizations receive 16 percent of their funding from government sources. This shows strong grassroots and faith community support for international development, but also tracks what we know from experience – that partnerships with government are often vital to success and developing strong, sustainable programs.

Faith communities are called to care for children, regardless of national boundaries or religious identification. Responding to 'the neediest,' not just 'the nearest' is an important component of many faiths. The faith community played a key role in the launch of ***A Promise Renewed***, a global effort to accelerate action on maternal, newborn and child survival. More than 221 faith based organizations have joined US and international governments, civil society and private sector organizations in signing a pledge to redouble their efforts to end all preventable child deaths.

## III. The importance of the 1,000 Days window

It is a privilege to testify about the importance of the first one thousand days window for impact. The period of time from a start of woman's pregnancy to her child's second birthday lays the foundation for a child's lifelong health, cognitive development and future potential.

### Investing in the 1,000 day window of opportunity saves lives.

Each year under nutrition, including fetal growth restriction, stunting, wasting and micronutrient deficiencies along with suboptimum breastfeeding, is estimated to cause 3.1 million child deaths or 45% of all child deaths.[i] Worldwide, the mortality rate for children under five dropped by 47% between 1990 and 2012. We can celebrate that 17,000 fewer children are dying each day, but 6.6 million children under five died in 2012, largely from preventable causes.[ii] This is an epidemic of unthinkable magnitude, considering that the estimated cost per child of interventions to reduce stunting in children under 24 months is $96.58[iii] and a package of five proven life-saving interventions can be delivered for £5 [$8.25 USD] per year per child.[iv]

### Investing in the 1,000 day window of opportunity offers great return on investment

If there was a low risk investment opportunity that delivered a 4 to 1 benefit to cost ratio, most people would take it. Whatever sacrifices it might take in the present moment, if people knew that they could invest $100 today and receive $400 in a specified period of time, it would be a very popular investment opportunity. A conservative, median value of benefit to cost ratios for investments to reduce stunting in selected high-burden countries is 18 to 1.[v] For every $1 invested to reduce stunting an $18 return is estimated considering increased productivity, savings of resources and increased earnings in the job market. This is an excellent return on investment and compares favorably with other investments for which public funds compete.

### The Science of Investing in the 1,000 day window of opportunity

Research has found that stunting in the first years of life results in cognitive impairments that reduce an individual's ability to learn resulting in reduced lifetime earning potential. The areas of the brain specifically affected are the:

1. pre-frontal cortex (related to attention, fluency and working memory)
2. hippocampus, reducing dendrite density (affecting spatial navigation, memory formation and consolidation)

3. reduced myelination of axon fibers (thus reducing the speed at which signals are transmitted between neurons)
4. damage to the occipital lobe and the motor cortex (delays in the development of locomotor skills)

Those who experience poor nutrition in the first 1000 days of life (from conception to 2 years) have a higher risk of lifelong physical and mental disabilities, which is likely to impact their cognitive ability, school performance and earning potential. Countries can lose between 2 to 3 percent of their potential Gross Domestic Product (GDP) each year.[vi]

## IV. FH's contribution to the 1,000 days window of opportunity

### Effective behavior change communication resulting in reductions in malnutrition

Food for the Hungry train's teams of community volunteers to deliver behavior change communication about key nutrition, hygiene and disease prevention practices. This strategy of behavior change, called the Care Group Model, has reduced infant and child mortality rates dramatically.[vii] A final evaluation of a Food for the Hungry, USAID funded Child Survival project in rural Mozambique (using the current version of the Bellagio Lives Saved Calculator[viii]), saved an estimated 6,316 lives of children less than five years of age, and estimated 32% reduction in Under Five Mortality Rate (U5MR). Malnutrition (weight for age) in children under two years of age decreased by 22% and 34% in the project areas (both changes are statistically significant).

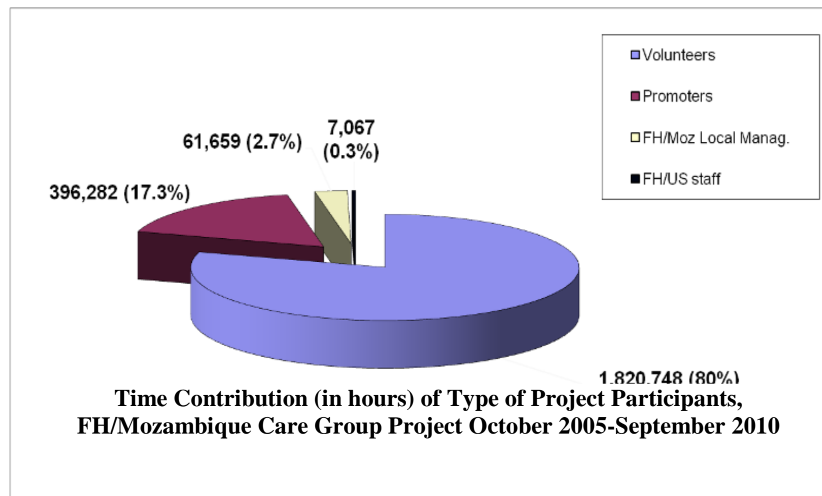
The three year (8/08-9/11), multi-sectoral, Ethiopia Title II Program, led by FH and funded by USAID, included maternal child health and nutrition focused Care Groups, among other agriculture, livelihood, financial management and disaster risk reduction interventions. Results from the final evaluation showed an increase in the dietary diversity score from a baseline of 3.14 to 3.97, increasing average months of food provision from 8.4 to 10 and average number of livestock per household increased from 4.05 to 5.00 and underweight reduced from 46.2% to 40.0%.

FH's three year (8/08-9/11), multi-sectoral, USAID funded DRC Title II program used the Care Group approach and saw successful changes in household behaviors resulting in beneficiary children with the three appropriate infant and young child feeding practices increasing from 5.7% to 61.2% and households adopting a least three improved hygiene behaviors increasing from 31.4% to 66.3%. In addition year round access to an improved water source within 200m of house increased from 47.4% to 67.6%.

### Community mobilization

Many international development projects mobilize paid employees, but Food for the Hungry mobilizes entire communities to contribute to the first 1,000 days window of opportunity. In the above mentioned Mozambique Child Survival project, FH measured the hours all project participants contributed and found that 80% (or 1.8 million hours) of the project work was carried out by community volunteers and 97% of the work was done by community-level staff and volunteers. Just 3% of the work was done by local or international management staff.

Recent social network analysis studies have shown that many behaviors and conditions spread person-to-person through social networks such as smoking, obesity, and even happiness.[ix] Social networks normally have information hubs or individuals who have a lot more connections and influence than other members in the network. The authors of the most prominent social network studies (Christakis and Fowler) have suggested that effective behavior change approaches should target these social network "hubs" with prevention messages. Early results with such approaches have shown documented success.[x] Typically in Care Group projects, a group of targeted women (for example pregnant women and women with children under 2 years of age) are organized geographically into a small group and asked to elect among themselves or select a woman who lives nearby them to be their "lead volunteer." Prior to the election, the women who will nominate the leader, are told what characteristics their leader will need to have to be successful. In this way Care Groups tap into social networks, normally electing the most connected and influential women among them to be their leaders and share information with them.



**Time Contribution (in hours) of Type of Project Participants, FH/Mozambique Care Group Project October 2005-September 2010**

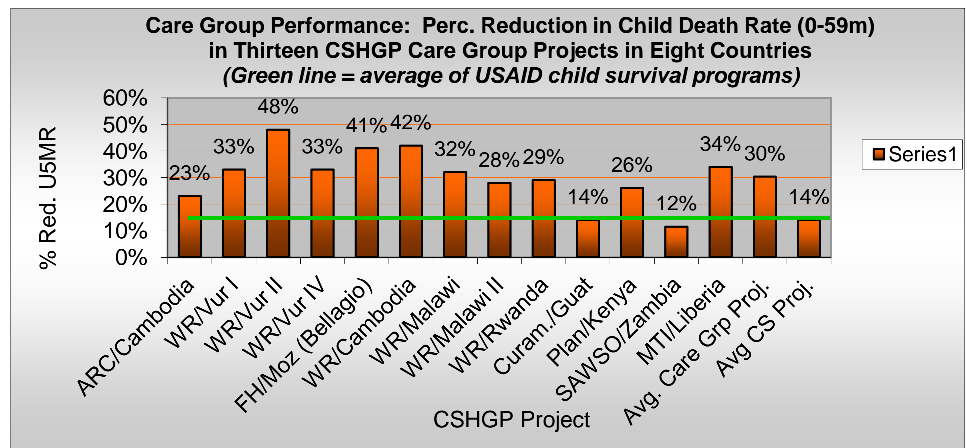
**Sustainable Results**

FH has observed remarkable sustainability of behaviors that contribute to good nutrition in the 1,000 day window of opportunity. The Care Group model FH uses to promote healthy behaviors is so effective because all pregnant women and mothers with children under 2 are invited to participate in the program. The mothers listen to messages shared by their peers in a small group setting. Outreach activities and messaging is done to reach men, the community, and grandmothers. In this way, entire communities are blanketed with new knowledge and practices that will continue long beyond the life of the activity. In one Care Group project, a survey was done 20 months after the program ended and found that mothers continued practicing key health behaviors. As a specific example, treating children aged 0-59 months with diarrhea with Oral Rehydration Solution (ORS) increased from 46% to 82% during the project timeframe; 20 months after project closure the rate of diarrhea treatment with ORS was 83%.

In addition to behavior sustainability, Care Group volunteers also were found to be continuing their work with local leaders taking initiative to replace positions if a volunteer was not able to continue. The same Care Group follow-up survey indicated a 93.4% retention rate among Volunteer Leader Mothers and found that local leaders had replaced volunteers who had resigned, moved or died and organized their training.[xi] Despite receiving no new lessons or materials, over half of the beneficiary households reported being visited by their Volunteer Leader Mothers in the last two weeks.[xii]

**Dissemination of Effective Methods with others**

FH is committed to sharing with governments, NGO's and other stakeholders effective ways of improving nutrition in the 1,000 day window. FH has also been promoting the Care Group model through Care Group Website (www.caregroupinfo.org), at international forums, through articles in peer-reviewed journals and through the creation of the Care Group Implementation Manual. The Care Group Implementation Manual was written and produced in 2012 by FH staff to help other organizations implement Care Groups effectively and document lessons learned.




A second, peer-reviewed version of the manual is being developed as part of a USAID funded capacity building program and is targeted for release in 2014. FH is passionate about sharing the Care Group model with Ministries of Health and other stakeholders because it has proven to be so effective in creating change that leads to significant reductions in child mortality and malnutrition. In a review of 13 Care Groups project in 8 countries, the reduction in under-five mortality was done using the Bellagio Lives Saved Calculator. The average estimated reduction in Under Five Mortality Rate (U5MR) for these 13 Care Group projects was 30%, while, by contrast, the average of U5MR for USAID child survival projects was 14%. A review involving 58 non-Care Group projects and 13 Care Group projects found that Care Group interventions outperformed non-Care Group projects on 12 out of 13 results-level behavioral and coverage indicators.[xiii] Care Groups have been so widely recognized for their effectiveness in reducing malnutrition that they are now used by 24 NGOs in at least 20 countries.

**V. Policy Recommendations**[xiv]

Considering the body of evidence supporting an investment in the first one thousand days of life and the important role faith based organizations play turning that investment into improved and saved lives what can the United States Congress do?

1. Promote nutrition as a cross-cutting and "whole of government" initiative, thereby requiring different ministries (MoH, MoAg, MoEd) to break out of their silos and work in collaboration to solve the problem.

2. Support community delivery platforms for nutrition education and promotion as well as services such as integrated management of childhood illness. Focus on scaling up coverage

of nutrition interventions and reaching the very vulnerable through health facility and community outreach. Please refer to my colleagues, Dr. Henry Perry's testimony for more detail on the importance of community health workers in this effort.

3. Include livelihood programs as an integral component of women's empowerment and as a strategic approach to reducing the underlying determinate of poverty.

4. Ensure that WASH strategies, frameworks and resources are integrated into the US and other government nutrition programs.

5. Educate countries to recognize that nutrition is not a consumption issue; nor is it primarily a question of welfare. Strategic nutrition investments can contribute to human capital formation and can thereby drive economic growth.

6. Recognize that as we aim to increase *local* ownership of such strategies, the international NGO community offers a key role in helping local agencies build and scale their own capacity.

7. Consider the formation of a national coordinating body that takes on the roles of advocacy and coordination of national plans to improve national health and nutrition goals. Such a coordinating body could engage civil society organizations, academia and the private sector to improve and expand nutrition, food security, agriculture, education, WASH and gender empowerment initiatives and programs.

---

[i] Black, R.E., et al., Maternal and child undernutrition and overweight in low-income and middle-income countries. The Lancet, 2013; published on-line June 6. http://globalnutritionseries.org/

[ii] The Millennium Development Goals Report 2013, United Nations; A Promise Renewed, Committing to Child Survival: A Promise Renewed Newsletter, Issue 1, May 2013, MDG-Fund (Peru), Saving One Million Lives , UNICEF (Chad, India); Every Woman Every Child.

[iii] Hoddinott, J., et.al. The Economic Rational for Investing in Stunting Reduction. Maternal and Child Nutrition (2013). (Suppl 2), pp 69-82.

[iv] Based on the costing of five interventions—Vitamin A supplementation , therapeutic zinc, micronutrient powders, de-worming, and adequate iron and folic acid for pregnant women. Data provided by the World Bank: http://go.worldbank.org/TVP0EL5YV0.

[v] *Ibid., p. 69.*

[vi] World Bank, *"Nutrition: Overview."* http://uni.cf/qb63KK [last accessed 18 April 2013].

[vii] Edward, A. et al., Examining the evidence of under-five mortality reduction in a community-based programme in Gaza, Mozambique, Trans. Roy. Soc. Trop. Med. Hyg. (2007), doi:10.1016/j.trstmh.2007.02.025

[viii] The Bellagio Lives Saved Calculator is the work of the Bellagio Group that published the 2003 Lancet Child Survival articles and the 2005 Lancet Neonatal Survival articles. These spreadsheets were developed by Saul Morris of DFID while he was at the London School of Hygiene and Tropical Health.

[ix] Christakis, N and Fowler, J. (2008) The Collective Dynamics of Smoking in a Large Social Network. N Engl J Med;358:2249-58; Christakis, N. and Fowler, J. (2007); (2) The Spread of Obesity in a Large Social Network of 32 Years. N Engl J Med;357:370-9; (3) Christakis, N. and Fowler, J. (2008) Dynamic spread of happiness in a large social network: longitudinal analysis over 20 years in the Framingham Heart Study. BMJ 2008;337:a2338 doi:10.1136/bmj.a2338

[x] See Buller, D et al. Randomized Trial Testing the Effect of Peer Education in Increasing Fruit and Vegetable Intake," Journal of National Cancer Institute 91 (1999): 1491-1500. and Outcomes of a Randomized Community-level HIV Prevention Intervention for Women Living in 18 Low-income Housing Developments," American Journal of Public Health 90(2000):57-63.

[xi] "Retention of Community Health Volunteers Using Care Groups" presented by W. Meredith Long, Melanie Morrow, Pieter Ernst, Adele Dick. APHA 2002

[xii] "Retention of Community Health Volunteers Using Care Groups" presented by W. Meredith Long, Melanie Morrow, Pieter Ernst, Adele Dick. APHA 2002

[xiii] Tom Davis, MPH, presentation at the APHA Community-Based Primary Health Care Working Group Annual Conference, Washington, DC, 29 October 2011. Information collected from a review of 67 USAID CSHGP projects final evaluations.

[xiv] These Policy Recommendations are chiefly taken from the Alliance for Global Food Security (AGFS) Nutrition Strategy Comments Oct, 31 2013 document and Bread for the World Briefing Paper Number 19, Scaling up Global Nutrition: Bolstering U.S. Government Capacity, July 2012.