Joint Request for Funding by Asociación Hombro a Hombro, the Honduran Ministry of Health and the Asociación of Municipalities in the Frontier of Intibucá: Concept Proposal

From Basic Care to Comprehensive Care for the People of the Frontier

February 23, 2010

Organizations Requesting Support:

Asociación Hombro a Hombro, the Honduran Ministry of Health and the Asociación of the Municipalities in Intibucá (AMFI)

Title of Proposal:

A Pilot Collaborative Proposal to Reduce Social Exclusion by Implementing a Comprehensive Integrated Health Care System in the Mega-Communities of AMFI including the Municipalities of San Marcos Sierra, Concepcion, Colomoncagua, Camasca, Magdalena, San Antonio and Santa Lucia.

Verification of Need

Documented need was verified by UNDP as of July 2008.

Results Achievable within 60 months

Long Range Objectives-5 year plan

This proposal has the potential to demonstrate improvement in access to vital services for the people of this region within 60 months, beginning March, 2010.

Overview

By virtue of its partnership with Academic Health Centers in the United States, its successful efforts to obtain extramural grants, private donations and its partnership with the Honduran Ministry of Health, Asociación Hombro a Hombro is able to provide high quality programs that have real impact on poor communities. Combining these varied sources of funds and the addition of new funds will enable Asociación Hombro a Hombro to develop a comprehensive regional and integrated health system which will provide consistent, high quality health care to all 7 southern municipalities in Intibuca. The 303 square miles defining the region is rural mountainous and isolated. In addition, using a powerful data base and demographic surveillance integrated with health care data from providers will enable Hombro a Hombro to track health care outcomes from a population perspective. Asociación Hombro a Hombro's primary objective is to deliver a fair and

balanced health system that benefits all citizens of the region, including the poor and under-represented communities. However, it must also demonstrate effectiveness and applicability to all of Honduras. Thus the pilot project we are proposing intends to expand a demographic surveillance electronic database that integrates census data, health care encounters, as well as field and research data into a single system. Furthermore, we have demonstrated that this system can be used by local providers, is cost effective, and can guide interventions. .

Furthermore, Hombro a Hombro has advocated for and implemented a level of care for the poor communities of Intibuca that is beyond the rudimentary care outlined in the basic package. The kind of care delivered is desired by all socioeconomic groups and can serve as a model for Honduras and other poor regions in Central America. Care that is comprehensive includes seven elements that are essential to quality rural health care and yet beyond the definitions of the "basic package":

1. People must not need to walk more than one hour for basic care.

2. People must have access to 24 hour emergency care within an hour's drive by car. Emergency care must have the capacity to stabilize critically ill patients and transport them if needed.

3. Women's health and obstetrical care must be available 24 hours per day and within an hour's drive.

4. Certain services such as obstetrical ultrasound, cervical cancer screening, plain film radiographs, endoscopy and telemedicine can add to the level of care and reduce the need for costly transfer to higher levels of care available in Tegucigalpa.

5. Chronic disease care for adults should be available to all communities.

6. Restorative and preventative dentistry should be available to the rural populations.

7. Local and national health priorities should be based on reliable data that is accurately collected and recorded into a common electronic data base. Inputs must be real time and inclusive: from census to diagnostic codes to public health interventions.

<u>We are soliciting support for capitated payments beyond that offered for provision of the basic package.</u> Our cost analysis studies show us that care for the rural communities of Intibuca at the basic package level costs $23 per person per year but for a small incremental increase to a total of $39 per person per year, much higher quality measures can be included. With this higher level of funding, Intibuca can be the model innovation site demonstrating to other communities the value of this higher level of care. Hombro a Hombro believes that this pilot project is what communities need and want for individuals and their families.

Background Information: Asociación Hombro a Hombro has been working in Intibucá for more than 20 years. Honduras, with 7 million inhabitants, is the third poorest country in the Western Hemisphere and Intibucá is one of the five poorest departments in the country. According to World Bank Data, more than 50 percent of the population lives in poverty, 23 percent in extreme poverty. Asociación Hombro a Hombro selected the Frontier of Intibucá in 1990 as its service area because of its extreme need. Based upon United Nations indicators for the mega community AMFI, as of July 2008 extreme poverty in the service area ranged from 68.5 percent in Magdalena to 75.6 percent in Concepcion.

Figure 1: The seven municipalities of the Proposed Project

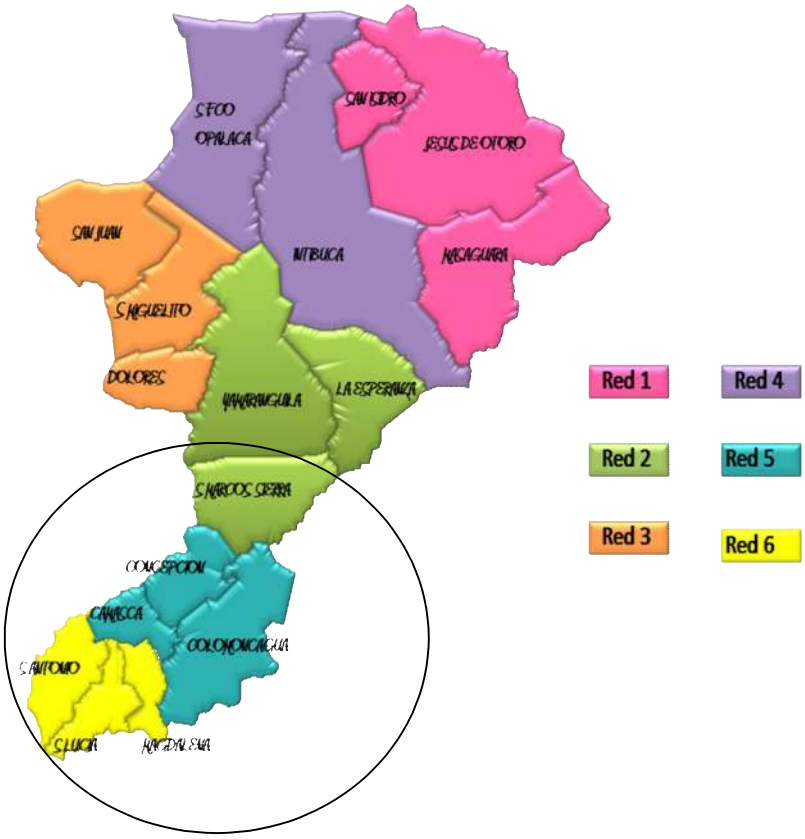


Table 1: INDICADORES: MANCOMUNIDAD AMFI

Variables	*S. M. de Sierra (%)*	*Concepción (%)*	*Camasca (%)*	*Colomoncagua. (%)*	*Magdalena (%)*	*Santa Lucia (%)*	*S. Antonio (%)*
Pobreza Extrema	73.4	**75.6**	69.9	72.4	68.5	69.4	-----
Exclusión extrema	**72.6**	**69.9**	54.2	60.0	60.8	63.9	------
Desnutrición Infantil (0-5Años)	**79.7**	69.5	66.5	70.2	63.7	65.2	67.1
Cobertura preescolar	35.3	39.5	45.4	39.1	53.8	**37.9**	**65.3**
Cobertura Escolar	93.6	**96.6**	94.2	92.7	94.7	**89.2**	92.9
Cobertura Plan Básico	71	48.6	51.1	55.3	52.2	**45.5**	55.7
Cobertura Diversificado	25.3	23.7	**33.7**	27.7	26.4	**18.3**	32.3
Partos atendidos por partera.	27.3	57.1	31	**74.3**	33.3	48.5	69.4
Tenencia de agua por tubería	31.8	78.5	**84.2**	81.6	70.1	82.3	77.4
Tenencia de servicio sanitario	58.6	87.3	**81.5**	70.4	60.6	**51.3**	66.5
Tenencia de alumbrado publico	29.3	33.5	60.2	54.8	65.3	57.2	**74.6**
Analfabetismo	**27.6**	20	15.8	18.8	19.1	**26.9**	16.9

Investigación realizada por PNUD – Naciones Unidas. Julio 2008.
AMFI: Asociación de Municipios Fronterizos de Intibucá

Table 2: Pobreza y Exclusión Social – AMFI

Municipio - mancomunidad	pobreza extrema	pobreza relativa	exclusión extrema	exclusión relativa
AMFI	72	6	63.9	19.8
SOL	68.1	9.9	59.9	12.3
MANCURISJ	75	7.8	63.9	11.9
COLOSUCA	68.7	11.4	56.6	10.6
COPAN	55.2	16.6	34.9	9.2

Why Comprehensive Integrated Health?

The rural municipalities in southern Intibuca suffer from poor health due to a variety of causes. They include:

- Lack of access to care due to geographic barriers. Roads are poor or nonexistent, houses are generally not clustered into communities but are distributed throughout the mountainous countryside, and for many even the most basic of health services is a four hour walk away.
- Poor rural people are reluctant to travel far distances, especially outside of the municipality for health care. It is not uncommon for the rural populations to avoid emergency care or even primary care for easily correctable problems because care is not locally available.
- A variety of social determinants of health are not addressed and if they are, the programs are not integrated into health services

Hombro a Hombro has developed a comprehensive program in three municipalities, Santa Lucia, San Antonio and Magdelana. The components of the program thus far include a range of services from primary care to emergency care and management of complex medical problems. The clinic in Santa Lucia offers xray, lab, ultrasonography, fetal monitoring, endoscopy and telemedicine. In addition, Hombro a Hombro has a comprehensive under five nutrition program, scholarships for poor children, a water filter project, low impact cook stoves and a program to promote the self esteem of girls through entrepreneurship. All of the programs include collaboration with the local Hombro a Hombro Health Committees, the community representatives of the Hombro a Hombro Association. This collaboration embodied in the name of the organization is at the core of the twenty years of success of Shoulder to Shoulder.

Box 2: Hombro a Hombro Program in Santa Lucia- the flagship site : Integrated Health Care for All

- Comprehensive health care services in the Clinic at Santa Lucia- primary care, dental care, obstetrics, 24 hour emergency care, laboratory, pharmacy, x ray and ultrasonography, endoscopy and telemedicine consults.
- Ambulance service if needed
- Community based programs for cervical cancer screening, folic acid distribution and maternal child care education
- Children's Health Initiative Brigades visit outlying communities and operate field clinics and preventive services bi-annually
- Under five feeding programs and research
- Home based water filter project
- Smokeless stove project
- Yo Puedo girl's empowerment project
- Scholarship program for attendance at secondary school
- The library of the frontier
- Comprehensive electronic data base integrating all projects

Summary of Project:

In response the critical need, as verified by UNDP, Shoulder to Shoulder is expanding its services in the Frontier region represented by AMFI. Consistent with the vision of reducing poverty through interventions in health, nutrition and education, we have developed a strategic plan to provide integrated, comprehensive services to the targeted areas. Our goals are guided by a tangible set of expected outcomes (Box 3):

Box 3: Hombro a Hombro Anticipated Outcomes

1. Basic primary care services, including preventive services should be available within a one hour walk for 90% of the population.
2. 24 hour emergency services, based in Santa Lucia and Concepcion, provided by well trained physicians, comprehensive obstetrical services and restorative dentistry should be available within a one hour drive for 90% of the population.
3. At least 90% of all households should have clean water.
4. At least 90% of all households should have smoke free, well ventilated stoves.
5. Motivated, capable students from poor families should have equal access to education beyond the 6^{th} grade, regardless of their ability to pay. A bilingual school will be developed to train leaders for the region.
6. All children, but especially children under two whose neuro-cognitive development is most at risk, should have adequate nutrition through evidence based nutritional supplementation and education.

What does comprehensive care cost?

The WHO in 2006 estimated that basic health care (to meet the Millennium Development Goals) could be provided in any poor country for $34 per person per year. Shoulder to Shoulder has done a cost analysis to determine the actual incremental costs of providing each level of care. We have found startling information that shows that for a modest increase in resources poor communities can greatly expand the delivery of care to include a more comprehensive array of services for an incrementally small amount. We have estimated that well run programs with strong partnerships can deliver excellent care that includes primary care, public health, 24 hour emergency and obstetrical care and record all census and care delivery data in a comprehensive data base for approximately $39 per person per year.

Table 3: Estimated Cost of Care

	Cost per person per year	
Basic Package	L. 430	$23
24 Hour Emergency care and Maternity Care	L. 188	$10
Preventive and Restorative Dental Care	L. 38	$2
Demographic Surveillance and Electronic Database	L. 75	$4
Total	**L. 731**	**$39**

Hombro a Hombro Strategic Plan:

The following is an outline of the Six Year Strategic plan for Health for Shoulder to Shoulder:

- **2010**
  - MOH contract: Hombro a Hombro is in discussion regarding contracts by the Ministry of Health to assume management of the basic package (primary care), public health, maternal child care and emergency services for municipalities of Magdalena, San Antonio and Santa Lucia, Concepcion and San Marcos de Sierra.
  - Complete construction in Concepcion of a medical clinic, dental clinic, emergency room and pharmacy. Housing facilities for 24 hour, 7days a week, medical workers completed by 6/2010.
  - Outlying satellite clinic in Guachinpilincito completed by June 2010.
  - Hire and train administrative infrastructure; develop community organizations for collaboration and governance in San Marcos de Sierra.

- Continue nutrition research through The Mathile Institute to discover best practices for food supplementation in children under age five.
- Continue distribution of home based water filters (Potters for Peace).
- 165 scholarships for rural children to attend their local Collegio.
- Support to improve the infrastructure and capacity of AMFI for regional development.

- **2011**
  - MOH Contract added for Camasca and Colonmoncagua.
  - Complete the training modules and administrative management services and technology support for the electronic database.
  - Capital improvements in San Marcos de Sierra.
  - Initiate training and implementation of the Hombro a Hombro demographic surveillance system using the electronic data base.
  - Together with the MOH, the Hombro a Hombro U.S. Academic Partners, US technology companies and other NGOs active in Honduras, Hombro a Hombro will write and submit a major grant to the Bill and Melinda Gates Foundation to expand the Hombro a Hombro Health care model to all of the decentralized regions (approximately one million persons or 15% of the Honduran population).
  - Continued expansion of administrative infrastructure for AMFI.
  - Enroll first class in Bilingual School of the Frontier[7.]

- **2012-16**
  - Transfer of financial responsibility for the maintenance of the health system to the Ministry of Health.
  - Continue to seek independent funding for more population based studies using the demographic surveillance system.
  - Expand study scope of the Honduran Center for Human Nutrition Studies.
  - Expand other population based grants and studies
  - Possible replication of Health System in other regions of Central America.

Hombro a Hombro Organizational Background

Shoulder to Shoulder (www.shouldertoshoulder.org):[8] is a private, non-profit, non-governmental organization formed in Cincinnati, Ohio in 1996. It began providing health care services in southern Intibuca, Honduras in 1990, six years prior to its official incorporation. In the spirit of local empowerment, Shoulder to Shoulder worked with local community leaders in Santa Lucia to form Hombro a Hombro, a grassroots community-based, non-profit NGO registered in Honduras. Shoulder to Shoulder and its partner Hombro a Hombro work in tandem to achieve a single mission: to assist communities in poverty reduction strategies through health education and nutrition

programs, achieving sustainable development and improving the overall health and well being of its residents. Recognizing the organization's success, other centers joined the effort. Now there are 13 academic health center/community partnerships. Each community large and small has a local volunteer governing authority through its non-governmental, non-religious membership called the Hombro a Hombro Health Committee. Associacion Hombro a Hombro receives financial assistance from private donors, foundations, the Honduran Ministry of Health and the constituent academic health centers. Over the past twenty years, Hombro a Hombro has worked as a local grass roots community organization to improve the health and well being of all in their communities through their established health centers, nutrition programs, and school based empowerment groups, and health prevention and public health initiatives.

2009 Grants and Contracts with Organizations Collaborating With Associacion Hombro a Hombro to Create Coordinated Effort, Focus, and Synergy in the Frontier Service Area

- **$400,000:** Honduran Ministry of Health[6] Contracted by Ministry of Health to assume management of the basic package (primary care), public health, maternal child care, and emergency services for municipalities of Magdalena and San Antonio.

- **$550,000:** Mathile Institute Partnership for the Advancement of Human Nutrition in Women and Children in collaboration with faculty from the UNC School of Public Health and Center for Global Studies for a randomized, controlled trial to demonstrate the effect on anthropometric and health outcomes of a lipid based nutritional supplement with complimentary foods in children under two. This project is intended to be a five year renewable grant leading to a Center for Nutritional Studies in Concepcion, Intibucá.[8]

- **$200,000:** The Benjamin Josephson Fund: for capital expenditures for the Concepcion Health Center Project. Long range goals include medical and dental center, OB services, surgery, community center and nutrition center.

- **$200,000:** Roy and Melanie Sanders Foundation: for capital expenditures for the Concepcion Project.

- **$40,000:** The Dorthea Ross Haus Foundation: awarded 3/2008 to deliver evidence based interventions to children in rural Intibucá (grant completed 1/2009).

- **$250,000:** Individual donations for scholarships reaching 165 children and allowing them to attend secondary school, funds to operate two dental clinics, supplements for uncovered medical care expenses, social services and infrastructure costs.

- **$900,000:** 13 U.S. Academic Health Center/Community Partnerships: In kind donations of services and goods. In FY 2008, 330 volunteers traveled to Honduras.

- AMFI Mega-Communities have recognized Asociación Hombro a Hombro's ability to develop an integrated and efficient health care system

Evaluation: The Database:

Shoulder to Shoulder has created a sophisticated and powerful database that integrates demographic and census data with medical encounters, community based interventions, including public health interventions and research projects. It has powerful searching capacity and can find patients and house locations within seconds. Since the start date in December 2008 the system has:

- 17,138 individuals entered
- 3040 houses with GPS coordinates
- 860/2075 diagnostic codes/treatment codes (ICPC-2)
- 12,000 encounters
- Pivot table extracts for various reports

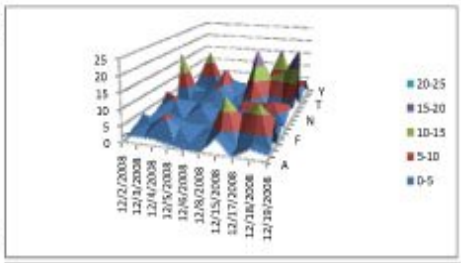
The implications for this system are powerful in that it can track outcomes at the population level. For example, the following questions could be answered:

- Where are the aldeas with the greatest poverty index?
- What is the effect of a water filter project on the incidence of diarrhea in children under two?
- Where are the communities that have not had cervical cancer screening?
- Which communities have the highest incidence of wasting and stunting?
- Have the "supplemental food programs" improved the health outcomes for children enrolled in the program?

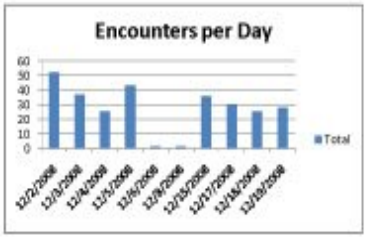
This system is built on a Microsoft Access platform and is easy to learn. In its current use, data is recorded on hand written templates by providers in the clinic, in the field and in research projects. The data is entered by two recorders who are local graduates from a health promotion training program. We have been able to train these employees to maintain the integrity of the data by making the program simple to follow and available in English and Spanish.

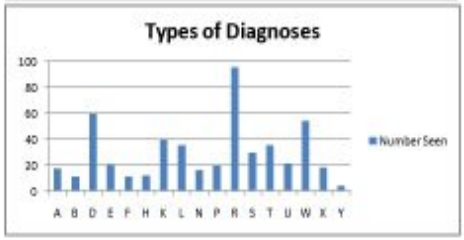
The following example shows the type of reports that can be generated:

Count of Action_Code	Type																
Fecha	A	B	D	E	F	H	K	L	N	P	R	S	T	U	W	X	Y	Grand Total
12/2/2008	2	1	2	4	1	2	5	6	1	1	17	5	3	1	2		1	52
12/3/2008	2		3	2			6	4	2		3	1			14			37
12/4/2008	2		6	5				1	2	1	4	2	1	1	2			27
12/5/2008	1		3	3	1		4	3		1	6	4	10	2	4	1		43
12/6/2008												1						1
12/8/2008					1													1
12/15/2008	5	5	14	1	1	3	7	6	4	10	20	7	2	4	4	6		99
12/17/2008		1	9	3	1	3	7	4	2	1	11	2	10	5	17	7	2	85
12/18/2008	3	3	13	1	3	2	8	5	1		13	5	7	3	5	2	1	75
12/19/2008	2	1	9		4	2	4	6	4	5	21	2	2	5	6	2		75
Grand Total	17	11	59	20	11	12	39	35	16	19	95	29	35	21	54	18	4	495



Encounters Per Day			
Fecha	Total		
12/2/2008	52		
12/3/2008	37		
12/4/2008	25		
12/5/2008	43		
12/6/2008	1		
12/8/2008	1		
12/15/2008	36		
12/17/2008	30		
12/18/2008	25		
12/19/2008	28	Max	Ave
Grand Total	278	52	34.5





Number and % of Diagnostic Codes per Encounter								
	Column Labels						Total #	
	1		2		3		Code	Total %
Row Labels	# Code Types	% Types	# Code	% Types	# Code	%		
12/2/2008	52	100%		0%		0%	52	100%
12/3/2008	37	100%		0%		0%	37	100%
12/4/2008	25	93%	2	7%		0%	27	100%
12/5/2008	43	100%		0%		0%	43	100%
12/6/2008	1	100%		0%		0%	1	100%
12/8/2008	1	100%		0%		0%	1	100%
12/15/2008	36	36%	48	48%	15	15%	99	100%
12/17/2008	30	35%	46	54%	9	11%	85	100%
12/18/2008	25	33%	44	59%	6	8%	75	100%
12/19/2008	28	37%	32	43%	15	20%	75	100%
Grand Total	278	56%	172	35%	45	9%	495	100%

Type	Description
A	Probl Gen, Inesp A; General and Unspecified
B	Sangre, Inmunit; Blood, Blood Forming Organs and Immune Mechanisms
D	Aparato Digestivo; Digestive
E	Missing or Bad Code
F	Ojo y Anejos; Eye
H	Apar Auditivo; Ear
K	Apar Circulatorio; Cardiovascular
L	Musculoesquelético; Musculoskeletal
N	Sistema Nervioso; Neurological
O	Dental
P	Probl Psicologicos; Psychological
R	Apar Respiratorio; Respiratory
S	Piel, Faneras; Skin
T	Apar Endocrino, Metab y Nutricion; Endocrine/Metabolic & Nutrition
U	Apar Urinario; Urological
W	Childbearing Fam Planning
X	Apar Genital Fem y Mamas; Female Genital
Y	Apar Genital Masc y Mamas; Male Genital
Z	Problemas sociales; Social Problems

Estimated Budget:

The contracts, grants and philanthropic giving to operate each individual municipality are currently insufficient to support the integration concept of AMFI and it will require greater investment in education, information systems, and financial oversight. Associacion Hombro a Hombro under the current reimbursement offering will need to cover additional expenses by more than $800,000 to continue its provision of extensive services to the approximately 30,000 people in the current catchment area. This amount of annual operating expenses is not sustainable by an NGO, including Hombro a Hombro. Although Hombro a Hombro has been successful in raising capital for one time expenses and building infrastructure, recurring costs will need to have a sustainable source of funding. If during this pilot project we can prove that such comprehensive services can be delivered at this capitation rate, and show via the database that outcomes are improved, further expansion will be both sustainable and desirable. Some savings will be realized just from the reduction of services required by the regional and national hospital system and by virtue of maintaining a healthier population.

In short, we believe that with a modest investment of additional funds by the Ministry of Health Decentralization Contracts and the organization of regions by mega communities such as AMFI, this project could be sustainable. We will continue seeking funds from philanthropic foundations, governmental organizations, and private individual donations for capital improvements of facilities.

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Appendix 1. 2009 Activities of Hombro a Hombro

Project	Successes	Next steps	Timeline
Cook Stoves	23 volunteers trained	Quality control	2010
	300 stoves built	600+ more to build	2010
Follow up study for stoves	First meeting with GTZ Feb. 9	Develop proposal for up to $60,000	March 2010
Water filter project	203 Santa Lucia 108 to Community health volunteers (SL) 250 Concepcion 155 San Marcos	Develop proposal for project in Concepcion w/Marti Use recovered funds to purchase more filters (currently have enough for 112)	Response by April 2010 April
Yo Puedo	160 girls in 10 schools	Initiate 2010	March
Scholarship students	40 Santa Lucia, 40 Concepción 53 Camasca, 34 San Marcos		
Library	74 children participate regularly in available activities	Promote activities and increase attendance to 100 children	2010
CHI	6094 children seen Transition of management Updated data collection system	Moving CHI sites out of communities with StoS health centers Complete checklists for planning and medication needs Provide regular reports back to the U.S. and health centers	February 2010 February 2010 In progress
MANI	Trained 10 health promoters Enrollment of 300 participants from 19 sites Collaboration with 19 local stores	Final community visits to take place in March Analysis and publication of results	March 2010 2010-2011
Food Against Hunger rice/beans supplement	Concepción 200 San Marcos 75 Santa Lucia 30	Develop protocol for an integrated nutritional supplementation program including Chispidutos and Rice/beans	February 2010
Brigades	349 volunteers came on 20 brigades to Honduras in 2009 Additions to management team	Update the brigade handbook to include information on new projects/activities, importance of data collection, pre-trip timeline and checklist, etc. Streamline evaluation process	2010 In progress
Government contract	CQI/Chart review process developed and implemented in all health centers Annual review score of 86% results in an incentive payment of $2,600 2010 contract includes Concepcion	Begin training in Concepcion area Improve % of women who receive pap-smears/VIA, increase fidelity in completion of required documentation: 1. AIEPI training for new employees 2. CONE for all medical personnel 3. Women's Health Coordinator	March/April 2010 1. May? 2. 2010 3. March February/March 2010 March 2010

	32 contract employees 8 Secretary of health employees 2 nurses in Social Service 75% of GPS collected Conce, Jiquinlaca, Guachi, Santiago completed	Raise per-capita payment Include San Marcos de la Sierra 25 new contracts for Concepción 5 new Sec. of health employees Request 3 doctors and 6 nurses in Social Service for Concepcion (part of the 25) Analyze need/feasibility of hiring additional staff to complete the census 3 months after signing the contract	March 2010 February 2010 After signing the 2010 contract (March?)
Demographic Surveillance System	Census, clinic data, public health data, project data for 3 municipalities Visit from MSH-USAID	Installation in a remote clinic (Magdalena) Follow up meetings	February/March March