



**Proposal for Peru Medical Clinic**  
*In response to August 2007 Earthquake*

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Pisco, Peru August 17, 2007  
REUTERS/Mariana Bazo



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## 1. Executive Summary

A powerful earthquake of 7.9 on the Richter scale shook the coast of central Peru on 15 August, 2007, killing 514 and injuring 1,090 people. The epicenter was located 60 kilometers west from the province Pisco. The area of disaster stretched along the coast through Chincha, Pisco, and Ica provinces. The government estimates 37,599 destroyed houses and over 40,000 homeless families without basic necessities. More than 150,000 people have no access to drinking water due to damage of the water pipe system. Four health facilities were reported destroyed, including two hospitals in Pisco near the epicenter and three health centers in Castrovirreyna, Huancavelica, one of the poorest areas in Peru. There were 22 affected health centers in Pisco and four damaged hospitals in Ica. The loss of health facilities caused greater impact on the population morbidity and on the level of economic hardship. According to Dr. Poncellet, PAHO manager for Emergency Preparedness and Disaster Relief, there are enough Peruvian doctors on the field of disaster. The most important problems are now local access to health services and distribution of basic goods. The World Health Organization identified one of the main emergency health needs is keeping health facilities operational in the aftermath of disaster. (See *Appendix A & B, Maps of Peru*)

The proposed Real Medicine project is focused on erecting a free medical clinic to service the needs of the earthquake victims in the impoverished communities surrounding Pisco in the Ica province with coverage potentially extending into the Huancavelica province. Many people have suffered physical and emotional trauma in the wake of the earthquake. Since 74% of the population of Peru lives in urban areas, there is already a great disparity, even before the earthquake, between the healthcare resources made available to rural communities versus urban centers. Thus, the clinic will be a permanent fixture in the community and will be aimed at providing consistent comprehensive healthcare and support to those who need it most. This will include acute care, treatment of chronic conditions & illnesses, mental health, and community health education & prevention initiatives. (See *Appendix C, Urban vs Rural*)

The project will be carried out in two phases. In the first phase, resources will be directed towards opening the clinic in a timely fashion so patients can begin receiving medical treatment. Local healthcare practitioners may be scarce, so an efficient solution will be implemented which best utilizes the limited personnel resources available to us. A referral system will be initiated so patients requiring more advanced procedures and surgeries can receive the proper care they need from hospitals in Lima, a 4-5 hour drive.

The second phase of the project will be aimed at prevention and education in an attempt to help alleviate public health concerns at the source. Outreach programs to be deployed include hygiene & sanitation education, prenatal education, and nutrition.

A partnership will be formed with a Peruvian NGO. The participation of a Peruvian organization is essential for effective implementation of the proposed plan of action. The Peruvian partner will provide established relationships, contacts, knowledge of the area & local customs, and a local presence which will promote acceptance within the community.

The target date to open the clinic is November/December of 2007. (See *Appendix D, Real Medicine*)



People walk past the rubble of houses and a car, which were damaged after an earthquake struck, in Pisco August 17, 2007. **REUTERS/Mariana Bazo**



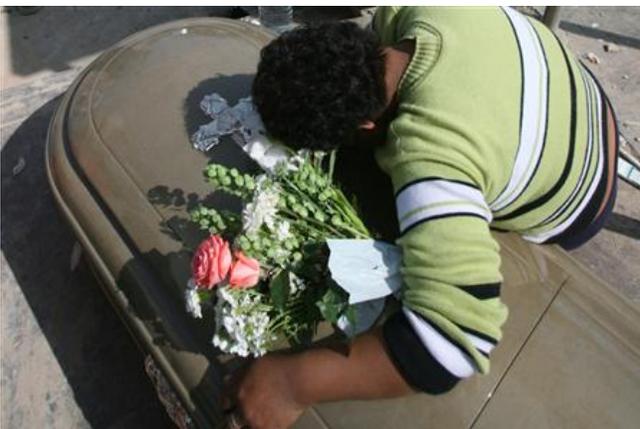
An aerial view of flooding resulting from an earthquake in Pisco, south of Lima, August 16, 2007. **REUTERS/Peru's Interior Ministry/Handout**



A soldier stands guard in the centre of Pisco, south of Lima, August 17, 2007. **REUTERS/Mariana Bazo**



People walk past buildings damaged after an earthquake struck in the centre of Pisco August 17, 2007. **REUTERS/Mariana Bazo**



A woman cries over her relative's coffin outside the hospital, August 17, 2007. **REUTERS/Mariana Bazo**



A woman looks through her damaged home in Pisco, south of Lima August 17, 2007. **REUTERS/David Mercado**



## 2. Mission

The Peru Clinic will focus on providing comprehensive treatment and health education for physically, mentally, and financially afflicted residents of the refugee camps. To preserve the integrity and efficacy of the project special consideration will be given to the following values and principles:

- **Flexibility** -- The clinic will be mobile to best cater to the relocation and permanent placement of the refugees.
- **Sustainability and Self-reliance** -- The clinic will be managed and operated by Peruvians.
- **Accountability** -- The project will ensure proper stewardship of all funds.
- **Cultural sensitivity** -- The project will be responsive to local culture and customs.
- **Holism** -- The project will provide education, prevention and care.

## 3. Phase I – The Clinic

Phase I is focused on opening the clinic and addressing the immediate needs of the victims.

### 3.1 **Clinic Infrastructure**

3.1.1 Structure/Edifice to House Clinic - Once a location has been determined, a building will be purchased (or rented). The building must have a few rooms for exams or larger rooms which can be partitioned for examinations, procedures and recovery. One room (which can be locked) will be used to store medical equipment, supplies, and medicine. Renovations and repairs may have to be made to bring the clinic into operable fashion. Estimated cost to purchase clinic: \$15,000; Estimated cost for renovations and repairs: \$2,000. (See Appendix H, Budget)

3.1.2 Staff – The clinical staff will be composed of hired Peruvians. Proper needs assessment will be needed to determine the number and type of clinicians to work at the clinic. (See Appendix H, Budget) Below is an estimate based on past projects:

- 1 Physician (\$1200/mo)
- 1 Nurse (\$500/mo)
- 1 Clinical Manager (English speaking) (\$500/mo)
- 1 Clinical assistant (\$300/mo)
- 1 Pharmacist/Laboratory Technician (\$300/mo)
- 1 Night Watchman (\$300/mo)
- 1 Clerical assistant for cleaning, laundry, etc. (\$200/mo)

**Clinicians** – There is approximately 1.2 physicians for every 1000 people in Peru. Rural areas will be somewhat marginalized as most of the physicians are concentrated in urban areas. It is not expected to be too difficult to attract a physician. In addition, we will seek to employ a nurse. It will be important to offer competitive wages as a retention strategy.

**Clinical Manager** – The Manager effectively manages the day-to-day operations of the clinic. Responsibilities include:

- Recruitment of staff
- Supervision, disciplinary action, termination of staff
- Scheduled hours of operation
- Facilitating patient flow
- Procurement of local supplies/equipment
- Ensuring integrity of the patient referral system
- Administration of capital resources
- Acting as liaison with USA team
- Reporting clinical activities to the USA team
- Overseeing the financial reporting system
- Maintaining accurate records of the number of patients seen per day, diagnoses/treatments, and allocation of monetary funds
- Emailing the records to the USA on a monthly basis (must be trained in basic computer skills). This may involve traveling to the closest village with available internet resources. See section for Reporting.
- Monitor day-to-day operations of clinic in absence of Clinical Manager

**Clinical Assistant** – The assistants can be either nurses or even members of the local community with limited knowledge of basic healthcare. The assistants will help the clinicians in procedures and administration of medical care.

**Pharmacist** – The pharmacist will maintain inventory and control the distribution of medicine. The pharmacist does not necessarily have to be an educated pharmacist in the traditional sense. If necessary, a responsible individual can be trained into this position. The same employee will also act as the laboratory technician and perform tests requested by the clinicians.

3.1.3 Water – Clean water is essential for proper execution and administration of clinical services. If the accessible water is not potable, it will be filtered and treated. Catchment tanks can be used to store treated water.

3.1.4 Electricity – It is assumed that the clinic will be in an area with access to electricity. Much of the infrastructure has been destroyed however. In an electricity deficient area, two sources of power will be explored and potentially used in conjunction with each other: Solar Power and Gas-operated generator. Electricity will be conserved and used sparingly when situations require electricity

3.1.5 Waste Removal – An incinerator will be constructed for proper disposal of medical wastes.

3.1.6 Transportation – A converted truck will serve as an ambulance to transport people to and from the clinic. The truck will serve many purposes and prove to be a valuable asset for efficient operation of the clinic. Four-wheel capabilities will be necessary.



### 3.2 Services Offered

A broad primary care public health approach will be applied to all disorders.

3.2.1 Clinical care for acute and chronic problems.

*See Appendix H for breakdown of causes of death for children fewer than 5 years of age*

3.2.2 Referral Program – For conditions requiring more advanced procedures, specialists, and surgery, we will have a referral system to transport these people to a partner hospital in Lima. Children can be transported to the Peru-USA Children’s Hospital (a partner facility). Lima is approximately 4 hours away from the earthquake site. If their condition enables them to take public transportation, then we can fund their fare to Lima. If their condition is urgent and requires more private transportation, we can possibly use the clinic ambulance to transport the patients.

3.2.3 Medical Supplies & Medicine Inventory – *See Appendix F & G*

### 3.3 Organization

3.3.1 USA-Peru Administrative Committee (UPAC) –The roles and responsibilities of the UPAC are as follows:

- Assisting with the development and delivery of clinical services
- Soliciting consultation as needed
- Monitoring clinic accounting procedures and reviewing audits as appropriate
- Communicating with the partner organizations and donors

3.3.2 Peru Clinic Committee (PCC) – The roles and responsibilities of the PCC are as follows:

- The Clinical Manager will coordinate the recruitment, hiring and discharge of the clinic staff, and the PCC must approve of employees hired or discharged
- The PCC will seek, investigate and establish appropriate partnerships for supplies, medications, services and funding in Peru
- The PCC will provide an annual review on the clinic manager and report to the UPAC
- The PCC, with the assistance of the Clinical Manager, will report to the UPAC through quarterly, and will conduct an annual financial audit.

### 3.4 Financial Operations & Reporting

3.4.1 Distribution of and Accessibility of Capital Resources -- The project will maintain two accounts, one in the U.S. and one in Peru. The U.S. account is a non-profit account. Funds raised in the U.S. are deposited into this account, from which they are wired to the account in Peru. The latter account, the Peru Clinic account, is used to build and

run the clinic. Signatory authority will be with the Chair, Secretary and Treasurer of the PCC. The PCC thus holds financial responsibility for the Peru account and for clinic financial operations overall. The U.S. account will be overseen by the UPAC, which will also provide quarterly-annual oversight of clinic financial operations, coordinated by the UPAC Project Manager. Thus, ultimate financial oversight resides with the UPAC.

3.4.2 Reporting System – Accurate and detailed reporting is the responsibility of the Clinical Manager. If possible, the records will be kept on the laptop at the clinic. Receipts will be scanned. Records and scanned receipts will be emailed to UPAC from closest location with internet capabilities. Standard accounting procedures will be employed. Lastly an annual audit by a Peruvian CPA will be performed. The reporting system will include the following:

- Quarterly expense report
- Clinical Record of the number of patients seen, patient information, diagnosis/treatment information
- Clinical Progress Report

3.4.3 Budget for Phase I – (See Appendix H)

## **4. Phase II – Preventative Health Measures**

Phase II will have a more comprehensive focus and it is preventive in nature. A few outreach programs will be implemented once the clinic is up and running. The outreach programs will be focused on educating the communities in an effort to prevent health complications from arising. Phase II will be further developed in the coming months. At that time, we will outline detailed budgets, plans for execution, etc. The target timeframe to begin implementing phase II programs is in the spring 2008 once the heavy rains subside. Below is synopsis of a few outreach anticipated outreach programs.

### **4.1 Nutrition**

An outreach program focused on Nutrition will help increase the overall health of the community. As it stands right now, children are 200% more likely to be stunted and 120% more likely to die before the age of 5 if they live in rural areas versus urban areas. Malnutrition contributes to both of these statistics. Improper nutrition can be directly related to the lower educational level and financial capability of rural families. (See Appendix C & E)

### **4.2 Sanitation & Hygiene**

Once a proper needs assessment has been done, a plan will be put into action to improve the sanitation and hygiene within the community. This may include construction of ventilated toilets.

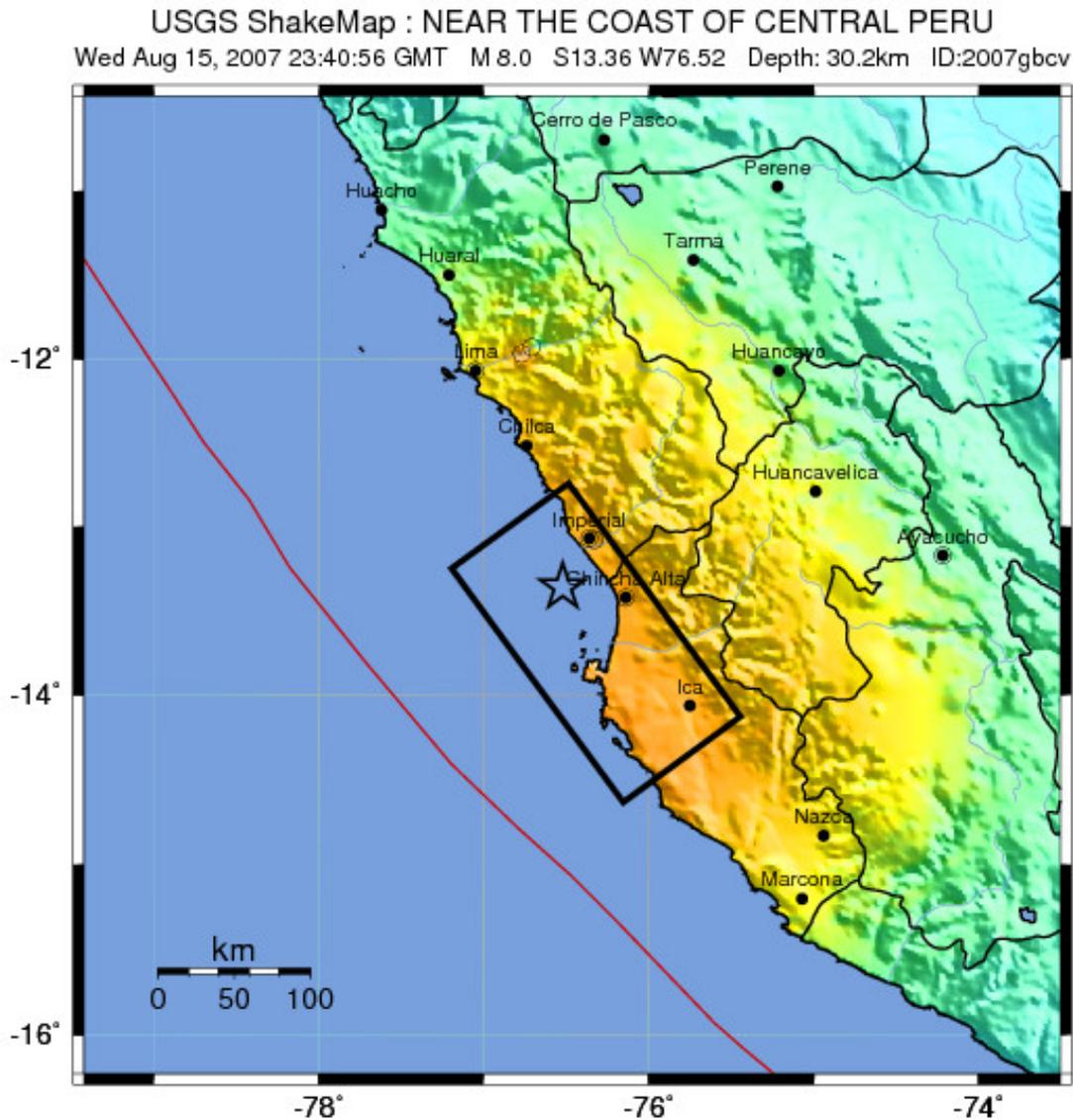


### **4.3 Prenatal & Newborn Health**

In rural Peru, there is an 8.5% chance that children will die before 5 years of age. Only 25% of births in rural areas are attended by skilled healthcare personnel. A prenatal health program will be established so pregnancies can be monitored. Pregnant mothers will be educated on proper nutrition and prenatal health. Support groups for mothers will be initiated. (See *Appendix C & E*)

## APPENDIX A

### Map of Peru (Earthquake Region)



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE Resistant Structures	none	none	none	V. Light	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy
POTENTIAL DAMAGE Vulnerable Structures	none	none	none	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy	V. Heavy
PEAK ACC.(%g)	<.17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
ESTIMATED INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+



## APPENDIX C

### Significant Disparity of Resources Between Urban and Rural Regions

According to the World Bank study (Cotlear D., *Peru: Reforming Health Care for the Poor*, Human Development Department Study, LCSHD Paper Series No. 57, March 2000), residents of the capital Lima have greater access to health services. The National Hospitals, most of which are in Lima, account for 24% of the total public health budget.

In spite of the improved access among non-Lima residents to the specialized Lima hospitals through cheaper and faster transportation, and communications, these facilities continue to benefit mainly to the population of Lima. Thus, better methodology is needed to achieve equalizing results in expenditure across regions and populations and to guide foreign aid to the most acute and disease and poverty. In addition to the general poverty indicators, indicators of burden of disease should be considered for targeting populations with critical health and poverty conditions.

The comparative analysis of five countries, where the RMF has been involved after natural disasters, shows that Peru has relatively good indicators of health and wealth per capita.

	Peru	USA	Pakistan	Kenya	Mozambique	Sri Lanka
<b>Mortality Statistics</b>						
Life expectancy at birth (years) (data from 2005)	72	77.5	61.5	51	45.5	71.5
Probability of dying (per 1000 population) between 15 and 60 years (adult mortality rate) (data from 2005)	153.5	109	222	473.5	596	173
Probability of dying (per 1 000 live births) under five years of age (under-5 mortality rate) ?	27 (2005)	8 (2005)	100 (2005)	120 (2005)	145 (2005)	14 (2005)
HIV prevalence among adults aged 15+ years (per 100 000 population) ?	480 (2005)	508 (2005)	86 (2005)	6125 (2005)	14429 (2005)	<100 (2005)

### Healthcare Capacity

Physicians (density per 1 000 population) ?	1.17 (1999)	2.56 (2000)	0.74 (2004)	0.14 (2002)	0.03 (2004)	0.55 (2004)
Nurses (density per 1 000 population) ?	0.67 (1999)	9.37 (2000)	0.31 (2004)	1.18 (2002)	0.21 (2004)	1.20 (2004)
Hospital beds (per 10 000 population)	11.0 (2004)	33.0 (2003)	7.0 (2003)	19.0 (2002)		30.0 (2001)

### Education & Economic Statistics

Adult literacy rate (%)	87.7 (2004)		49.9 (2004)	73.6 (2004)		90.7 (2004)
Net primary school enrolment ratio males (%)	97.0 (2005)	94.0 (2005)	76.0 (2005)	76.0 (2005)	75.0 (2005)	99.0 (2005)
Net primary school enrolment ratio females (%)	97.0 (2005)	90.0 (2005)	56.0 (2005)	77.0 (2005)	67.0 (2005)	98.0 (2005)
Gross national income per capita (PPP international \$)	5830 (2005)	41950 (2005)	2350 (2005)	1170 (2005)	1270 (2005)	4520 (2005)

However, the large disparities in distribution of wealth, income, and health services have to be considered in the proposed project. According to UNDP project, the percentage of poor people is

higher in remote rural Andean area, especially among Quechua indigenous people. In Huancavelica, 88 percent of the population lives in poverty and almost 75 percent lives in extreme poverty. Quecha people, 80 percent of Andean zone population, are the most poor and excluded population.

### Rural vs. Urban Peru

Likelihood of children < 5 years from rural areas dying versus children from urban areas	<b>120%</b>
Likelihood of children < 5 years from mothers with lowest educational level dying vs. children from mothers from highest education level.	<b>200%</b>
Likelihood of children <5 years from rural areas being stunted versus children from urban areas	<b>200%</b>
Likelihood of children <5 years from lowest wealth quintile being stunted versus children from highest wealth quintile	<b>940%</b>
Likelihood of children < 5 years from mothers with lowest educational level being stunted versus children from mothers with highest educational level	<b>310%</b>
Likelihood that a birth in a rural area will NOT be attended by skilled health personnel versus a birth in an urban area	<b>230%</b>
Likelihood that a birth from family in lowest wealth quintile will NOT be attended by skilled health personnel versus a birth from a family in the highest wealth quintile	<b>570%</b>
Likelihood that a birth from a mother with the lowest educational level will NOT be attended by skilled health personnel versus a birth from a mother with the highest educational level	<b>470%</b>

When comparing these ratios, many deductions can be made:

- Educated and more wealthy families tend to live in urban areas
- It is more likely for uneducated and lower income families to live in rural regions
- Rural regions are severely lacking resources for proper healthcare
- Children in rural regions are more likely to be stunted due to malnourishment
- Many families in rural regions do not have enough money to adequately feed or provide healthcare for their family



## APPENDIX D

### Real Medicine Foundation

[www.realmedicinefoundation.org](http://www.realmedicinefoundation.org)

The Real Medicine Foundation is a humanitarian organization with a creative approach. Rather than go in with preconceived answers, we approach each situation by asking, "How can we help?" In this way, we can respond effectively and appropriately with customized services designed to best meet the immediate and long-term needs of the specific individuals and communities we serve. Our global network of "Friends Helping Friends" enables us to directly connect with those in need, carefully access how to make the greatest impact, and cooperatively deliver the highest-quality support. Whether we are providing physical, emotional, social, or economic support, our goal is to empower with real solutions that heal, give hope, and rebuild lives, both now and in the future.

The Real Medicine Foundation was founded in May 2005 inspired by lessons we learned after working for months in the tsunami relief efforts in Sri Lanka. We established a children's clinic in an area devastated by the tsunami. The clinic remains open, fully functional and very effective in healing the physically and emotionally displaced children of the region. While in Sri Lanka, we realized that most organizations going into crisis areas to provide aid for immediate needs tend to ignore that people's lives remain shattered long after physical trauma is no longer an issue. The Real Medicine Foundation was created to provide longer term, sustained support in disaster, war-torn and poverty ravaged areas in addition to immediate physical aid. This long-term support addresses physical, emotional, economic and social needs, helping heal the 'whole person' and the 'whole community'.

In Sri Lanka, we promised to take on the financing of several specific projects such as long-term medication for children, salaries for local doctors and treatment for post-traumatic stress syndrome. What started out as a promise to a small village in a devastated area on the Indian Ocean is growing quickly into an *international network of "friends helping friends" around the world*.

As Real Medicine prepared to deploy psycho trauma support teams around the world, Hurricane Katrina hit the United States on August 29. Quickly, the organization re-directed efforts and Mobile Psycho-Trauma teams were dispatched to work with children from Louisiana who had been displaced by the hurricane. The effectiveness of this domestic effort was then duplicated as Real Medicine dispersed teams of medical doctors in response to the South Asia earthquake of October, 2005, creating programs for long-term support and local training, rather than just medical triage.

Currently, the organization includes Real Medicine USA, Real Medicine Asia (with branches in Sri Lanka, India, Pakistan and Indonesia), Real Medicine Africa (with projects in Kenya, Nigeria, Uganda and Mozambique), and Real Medicine Europe (so far in Germany).

Our vision, our dream, is to extend this pace of development over the next three years. By July 2010, the Real Medicine Network will include regional headquarter operations on each continent with teams deployed on long term missions in every country where the need arises around the world. The Real Medicine Global Network will provide medical support as well as long term psychological, economic and social support where disaster, poverty and war drive the need to care for children and their families, and re-build community.



The Real Medicine Foundation is designed to capitalize on the passion of its members and supporters, always avoiding the crippling effects of bureaucracy. With a simple, lean coordinating management team in the US, operational teams are located in America, Asia, and Europe. All these teams are composed of people wanting to contribute their skills, time, knowledge, and their passion to support people in need.

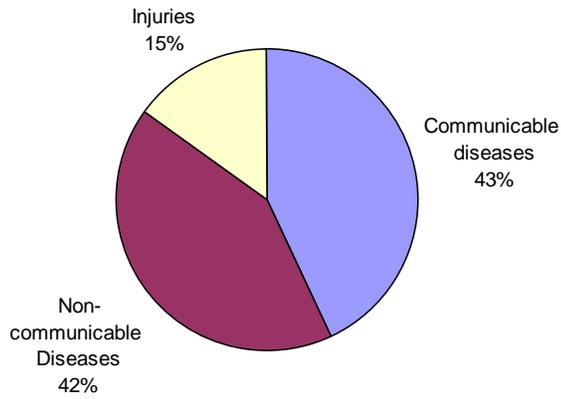
Specifically, the work of the Real Medicine Foundation is to: provide medical support to disaster, post-war, and poverty stricken areas: to connect people to people: to re-build communities: to care for the future by caring for the children: to devise strategies for global solutions: to provide training for local people to extend the mission.

*Partner with us and let's make a difference in the world, together.*

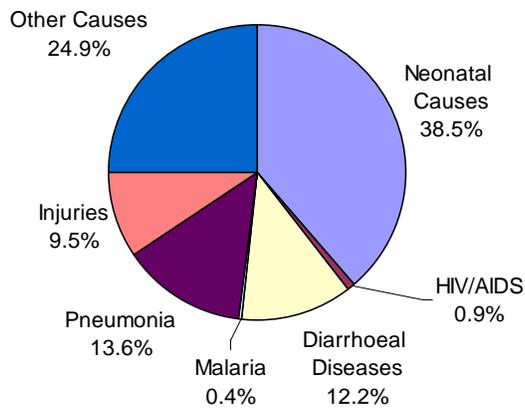
## APPENDIX E

### Mortality Statistics

**Cause of Premature Death (All Ages)**



**Causes of Death for Children < 5 Years of Age**



## APPENDIX F

### Medical Supplies

<u>Materials Pack</u>	<u>Size</u>	<u>Number</u>
Adhesive tape	1.25 cm/ 5m/ roll	50 rolls
Adhesive tape	2.5cm/5m /roll	50 rolls
Adhesive tape	5cm/5m/roul	50 rolls
Needles		18 200
Needles		21 200
Needles		23 500
Elastic bandage	4 inch	100
Plaster cast bandage	4 inch	50
Plaster cast bandage	6 inch	50
Lancet, surgeon's knife	15 blade	20
Lancet, surgeon's knife	21 blade	20
Plastic bottles	4 ounce	500
Surgical caps	adult	20
Surgical boots/shoe covering	adult	50
Catheter IV		18 50
Catheter IV		20 50
Catheter IV		24 50
Catheter Foley		10 10
Catheter Foley		14 10
catheter Foley		16 10
catheter Foley		18 10
catheter Foley		20 10
Rolls of cotton	450 Gr pièce	100
Gloves (non-sterile)	Small	500
Gloves (non-sterile)	Medium	500
Gloves (non-sterile)	Large	500
Gloves (sterile)		7.5 500
Gloves (sterile)		8 500
Surgical masks		50
Razor with handle		50
Suture set (disposable)		50
Antiseptic Soap	500 ml	10
Syringes	5 ml	500
Syringes	10ml	250
Syringes	60ml	100
Syringes insulin	1 ml	200
Bandage rolls (sterile)	2 inch	200
Clinical thermometer	Oral/ rectal	10
HIV test strips 1/2		500
Syphilis test strips		250
Urine for pregnancy test kits		250
Glucose test strips - Elite		500
Glucose test strips - One Touch		500

## APPENDIX G

### Medicine

	<u>DRUGS</u>	<u>Cost/unit</u> <u>(USD)</u>	<u>Cost/unit</u> <u>(PEN)</u>	<u>Doses</u>	<u>Total</u> <u>Cost</u> <u>(USD)</u>	<u>Total</u> <u>Cost</u> <u>(PEN)</u>
1	<b>Anesthetic and resuscitative agents</b>					
	Diazepam injection 5mg/ml	0.09	0.28	50	4.53	14.22
	Ethyl chloride spray 100ml (sprays)	5.29	16.61	10	52.85	165.95
	Oxygen					
	Lignocaine HCL 2%(50ml) (bottles)	0.79	2.48	30	23.56	73.98
2	<b>Analgesics, antipyretics and NSAIDS</b>		0.00			
2.1	<i>Non Opioids</i>		0.00			
	Aspirin tabs 300mg					
	Indomethacin tabs 25 mg	0.02	0.06	200	3.02	9.48
	Paracetamol suspension 120mg/5ml	0.38	1.19	200	75.5	237.07
	Paracetamol tabs 500mg	0.02	0.06	200	3.02	9.48
	Meloxicam tabs 7.5 mg(for people with peptic ulcer disease)	0.45	1.41	200	90.6	284.48
2.2	<i>Opioids</i>					
	Pethidine hydrochloride injection 100mg/vial	0.68	2.14	200	135.9	426.73
	Dihydrocodeine tartate tabs 30mg	0.3	0.94	200	60.4	189.66
3	<b>Anti-allergics and drugs used in anaphylaxis</b>					
	Adrenaline tart inj 0.1% 1ml	0.15	0.47	5	0.76	2.39
	Chlorpheniramine inj 10mg/ml	0.15	0.47	20	3.02	9.48
	Chlorpheniramine syrup 2mg/5ml 60ml	0.38	1.19	30	11.33	35.58
	Chlorpheniramine tabs 4mg			200	0.6	1.88
	Hydrocortisone inj 100mg base			30		
	Prednisolone tabs 5mg	0.01	0.03	30	0.23	0.72
4	<b>Antidote and substances used in poisoning</b>					
4.1	<i>General</i>					
	Charcoal, activated 5g powder	0.02	0.06	10	0.15	0.47
	Ipecacuanha syrup					
4.2	<i>Specific</i>					
	Atropine sulphate injection 1mg/ml	0.15	0.47	10	1.51	4.74
	Pralidoxime mesylate inj 200mg/ml					
5	<b>Anti-convulsants</b>					
	Carbamazepine tabs 200mg	0.05	0.16	100	4.53	14.22
	Diazepam injection 5mg/ml or 10mg/2ml	0.09	0.28	20	1.81	5.68
	Phenobarbitone tabs 30mg	0.01	0.03	10	0.08	0.25
	Phenobarbitone injection 200mg/ml	0.3	0.94	10	3.02	9.48
	Phenytoin sodium caps/tabs 50mg	0.01	0.03	300	2.27	7.13
	Phenytoin sodium inj 50mg/ml 5ml	1.54	4.84	300	462.06	1450.87
6	<b>Anti infective drugs</b>					
6.1	<i>Antihelminthics</i>					
	Mebendazole susp 200mg/5ml	0.6	1.88	500	302	948.28
	Mebendazole tabs 100mg	0.08	0.25	500	37.75	118.54

	Albendazole susp 400mg/5ml	0.45	1.41	500	226.5	711.21
	Albendazole tabs 200mg	0.91	2.86	500	453	1422.42
	Praziquantel tabs 600mg	0.26	0.82	500	128.35	403.02
6.2a	<i>Antibacterials - Oral liquids</i>					
	Amoxyllin susp 125mg/5ml	0.48	1.51	500	241.6	758.62
	Ampiclox syrup 250mg/5ml	1.21	3.80	500	604	1896.56
	Cotrimoxazole susp 200:40/5ml	0.72	2.26	250	181.2	568.97
	Erythromycin ethyl succinate syrup 200base/5ml	1.51	4.74	250	377.5	1185.35
	Metronidazole syrup 200mg/5ml	0.91	2.86	500	453	1422.42
6.2b	<i>Antibacterials - Oral tabs/caps</i>					
	Amoxyl caps 250mg or 500mg	0.08	0.25	500	37.75	118.54
	Chloramphenicol caps/tabs 250mg	0.11	0.35	100	10.57	33.19
	Ampiclox caps 250mg	0.15	0.47	200	30.2	94.83
	Cotrimoxazole tabs 400:80	0.08	0.25	500	37.75	118.54
	Doxycycline HCL caps 100mg	0.09	0.28	500	45.3	142.24
	Erythromycin stearate tabs 250mg	0.12	0.38	250	30.2	94.83
	Nalidixic acid tabs 500mg	0.05	0.16	250	11.33	35.58
	Nitrofurantoin sodium tabs 100mg	0.06	0.19	500	30.2	94.83
	Ciprofloxacin tabs 250/500mg	0.11	0.35	500	52.85	165.95
	Tetracycline HCL caps 250mg	0.05	0.16	500	22.65	71.12
6.2c	<i>Antibacterials injectibles</i>					
	Benzyl penicillin inj 1MU/5MU	0.08	0.25	100	7.55	23.71
	Fortified procaine penicillin inj 4MU	0.08	0.25	50	3.78	11.87
	Metronidazole inj 500mg	0.18	0.57	50	9.06	28.45
	Ceftriaxone inj 500mg/250mg	6.8	21.35	100	679.5	2133.63
	Gentamycin inj 80mg/2ml	0.08	0.25	50	3.78	11.87
6.2d	<i>Anti-leprosy and Anti-Tuberculosis drugs</i>					
	Streptomycin sulphate inj 1g					
	Rifater tabs (Rifampicin + Isoniazid + Pyrazinamide)			500		
	Rifinah tabs(Rifampicin + Isoniazid)(150mg+75mg)			500		
	Ethambutol HCL tabs 400mg			500		
	Isoniazid + Ethambutol tabs (150mg + 400mg)			500		
	Dapsone tabs 100mg			1000		
6.3	<i>Anti-fungals</i>					
	Clotrimazole cream 1% 15gms	0.45	1.41	100	45.3	142.24
	Clotrimazole vaginal pessaries 100mg	0.12	0.38	100	12.08	37.93
	Griseofulvin tabs 125mg	0.09	0.28	50	4.53	14.22
	Fluconazole tabs 200mg	0.91	2.86	100	90.6	284.48
	Nystatin oral suspension 100,000IU/ml	0.42	1.32	50	21.14	66.38
6.4	<i>Anti protozoal agents(mainly antimalarials)</i>					
	Quinine sulphate tabs 300mg	0.05	0.16	500	22.65	71.12
	Quinine HCL inj 300mg	0.09	0.28	500	45.3	142.24
	Proguanil(paludrine) tabs100mg	0.38	1.19	200	75.5	237.07
	Amodiaquine syrup 50mg/5ml	0.76	2.39	200	151	474.14
	Amodiaquine tabs 200mg	0.06	0.19	200	12.08	37.93
	Dihydro-artemisinin syrup 10mg/5ml	2.79	8.76	500	1396.75	4385.80
	Dihydro-artemisinin tabs 60mg	5.29	16.61	500	2642.5	8297.45

	Sulphadoxine/Pyrimethamine 500mg/25mg per tab	0.14	0.44	500	67.95	213.36
	Sulphadoxine/Pyrimethamine 250mg/12.5mg suspension	0.68	2.14	500	339.75	1066.82
7	<b>Anti-hypertensives</b>					
	Hydralazine inj 20mg/ml	0.08	0.25	10	0.76	2.39
	Hydralazine tabs 24mg	0.03	0.09	100	3.02	9.48
	Propranolol tabs 40mg	0.06	0.19	50	3.02	9.48
	Frusemide tabs 40mg	0.09	0.28	50	4.53	14.22
	Digoxin inj 0.5mg/2ml	0.15	0.47	50	7.55	23.71
	Digoxin tabs 0.25mg	0.15	0.47	100	15.1	47.41
	Nifedipine tabs 20mg					
8	<b>Dermatological preparations</b>					
	Calamine lotion	0.85	2.67	20	16.91	53.10
	Bezyl benzoate lotion	0.68	2.14	20	13.59	42.67
	Clotrimazole cream 1% 15gms	0.45	1.41	200	90.6	284.48
	Gentian violet crystals powder 10gms	0.18	0.57	20	3.62	11.37
	Silver sulphurdiazine cream 500gms	0.97	3.05	50	48.32	151.72
9	<b>Disinfectants and antiseptics</b>					
	Cetrimide 15% and Chlorhexidine gluconate			50		
	Lysol(cresol and soap solution)			50		
	Hydrogen peroxide 6% (20 vols)			50		
	Methylated spirit			50		
	Chlorhexidine gluconate solution 5%					
	Povidone Iodine 10%			50		
	Sodium hypochlorite soln 4-6%			100		
10	<b>Diuretics</b>	0.08	0.25			
	Frusemide inj 20mg/ml	0.08	0.25			
	Frusemide tabs 40mg			10		
11	<b>Gastro-intestinal drugs</b>			50		
	Compound magnesium trisilicate tabs	0.02	0.06	50	1.13	3.55
	Oral Rehydration Salts (WHO formulation)	0.08	0.25	500	37.75	118.54
	Loperamide caps 2mg	0.06	0.19	100	6.04	18.97
	Hyoscine N-Butylbromide inj 20mg/ml	0.09	0.28			
	Hyoscine N-Butylbromide tabs 10mg	0.03	0.09			
12	<b>Hormones,Endocrine drugs and contraceptives</b>					
	Hydrocortisone sodium succinate inj 100mg base	0.2	0.63	10	1.96	6.15
	Contraceptives low estrogen 30mcg			1000		
	<i>Insulin and anti-diabetic agents</i>					
	Chlorpropamide 250mg tabs	0.06	0.19	100	6.04	18.97
	Glibenclamide tabs 5mg	0.11	0.35		0	
	Insulin lente 100iu (vials)			20		
	Insulin soluble 100iu (vials)			20		
	Metformin tabs 500mg/850mg			100		
13	<b>Vaccines</b>					
	Anti snake venom sera inj			2		
	BCG dried vaccine powder			500		
	Pentavalent vaccine			500		
	Hepatitis B vaccine			500		

	Measles vaccine			500		
	OPV			500		
	Rabies vaccine Diploid vaccine			200		
	Tetanus toxoid vaccine					
	Tuberculin PPD vaccine					
14	<b>Ophthalmologic, ENT preparations</b>					
	Chloramphenicol ear drops 5%			100		
	Chloramphenicol eye drops 0.5%			100		
	Hydrocortisone eye drops 1%			100		
	Tetracycline eye ointment 1%			100		
15	<b>Oxytocics and antioxytocics</b>					
	Oxytocin inj 5IU/ml			50		
	Ergometrin maleate inj 500mg/ml			50		
16	<b>Psychotherapeutic drugs</b>					
	Amitriptylline hydrochloride tabs 25mg			100		
	Chlorpromazine HCL tabs 25mg/100mg			100		
	Chlorpromazine HCL inj 50mg/2ml			10		
	Diazepam tabs 5mg			100		
17	<b>Respiratory tract drugs</b>					
	Salbutamol inhaler 0.1mg/dose			50		
	Aminophylline inj 250mg/10ml			0		
	Salbutamol inj 0.5mg/ml			0		
	Salbutamol syrup 2mg/5ml 100mls			50		
	Theophylline tabs			100		
	Salbutamol tabs 4mg	0.03	0.09	100	3.02	9.48
18	<b>Solutions for water, electrolyte, acid, base disturbance</b>					
	Calcium gluconate inj 10% 10ml			0		
	Darrows solution 1/2 strength (500ml)			20		
	Dextrose inj 50% w/v (50ml)			20		
	Hartmann's solution (500mls)			20		
	Normal saline inj 0.9% (500mls)			20		
	dextrose 5%/10% solution w/v (500mls)			20		
	Sodium Bicarbonate inj 8.4%			10		
	Water for injection			20		
19	<b>Vitamins and Minerals</b>					
	Ferrous sulphate compound tabs 200mg			500		
	Folic acid tabs 5mg	0.02	0.06	500	7.55	23.71
	Vitamin A Retinol tabs 100,000IU			500		
	Multivitamin tabs	0.02	0.06	500	7.55	23.71
	Multivitamin syrup 100ml			500		
	Vitamin B complex tabs	0.02	0.06	500	7.55	23.71



## APPENDIX H

### Phase I Budget

EXPENSES	2007	2008
<b>Infrastructure</b>		
Building (purchase)	\$15,000	
Building renovations & repairs	2,000	\$2,000
electricity	50	300
water	20	120
Rain Water 8000 catchment tanks	1800	
Katadyn Filters (6)	450	
Latrine for clinic	1,500	
<b>Total Infrastructure</b>	<b>\$20,820</b>	<b>\$2,420</b>
<b>Clinic Supplies</b>		
Furniture (exam tables, beds, cupboards, chairs)	\$2,000	
Sheets for exam tables	400	
Blood pressure cuffs	150	
Thermometers (oral, rectal) 10	300	
Stethoscopes (3) @\$150	450	
Fridge-solar or gas powered	3,000	
Laptop computer for Clinic management/finances	1,500	
Weighing scale	150	
Fetoscope	30	
Centrifuge (battery operated) (1)	1,200	
Microscope (solar powered)	1,000	
Intravenous poles (2) @ \$100	200	
Needle destroyer (safe case) (2) at \$500	1,000	
Generator back up	3,000	
Autoclave	1,000	
Transportation-Village truck/ambulance	15,000	
Miscellaneous supplies		\$5,000
<b>Total Clinic Supplies</b>	<b>\$30,380</b>	<b>\$5,000</b>
<b>Personnel</b>		
Physician (\$1200/mo)	\$2,400	\$14,400
Nurse (\$500/mo)	1,000	6,000
Manager (\$500/mo)	1,000	6,000
Night Guard (\$300/mo)	600	3,600
Pharmacist/Lab Tech (\$300/mo)	600	3,600
Clinical Assistant (\$300/mo)	600	2,400
Clerical Assistant (\$200/mo)	400	2,400
<b>Total Personnel</b>	<b>\$6,600</b>	<b>\$38,400</b>
<b>Medications and Supplies</b>		
Medications - general (initial inventory)	\$20,000	\$5,000
Disposable equipment (lab equipment, etc)	4,000	
Propane for refrigerator, petrol for backup generator	500	500
Transportation, communication, repairs	5,000	5,000
<b>Total Medications and Supplies</b>	<b>\$29,500</b>	<b>\$10,500</b>
<b>Travel</b>		
Air/Ground USA-Peru, 1-2 Trips per year	\$8,000	\$10,000
<b>Total Travel</b>	<b>\$8,000</b>	<b>\$10,000</b>
<b>Total</b>	<b>\$95,300</b>	<b>\$66,320</b>



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