

**LAO PEOPLE'S DEMOCRATIC REPUBLIC**  
**PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY**

Oudomxay, 28 February 2013

# **REPORT OF MOBILE HEALTH CARE**

**For Dental, Ear, Nose, Throat, Eye,  
Expectant Mothers and Pediatric Services  
in the Remote Areas of**

**Houn and Pakbeng Districts, Oudomxay Province  
Lao PDR.**

**18-22 February 2013**

**Supported by: Lao Rehabilitation Foundation, Inc. USA**



## ABSTRACT

**Title:** Mobile Health Care for Dental, E.N.T., Eye, Expectant Mothers and Pediatric Service in the Remote Areas of Houn and Pakbeng Districts, Oudomxay Province, Lao PDR”.

**Support Donor:** Lao Rehabilitation Foundation, Inc.

**Actual Budget:** The actual budget for this mission was 33,385.00 USD.

**Actual Budget Funding:**

- The Lao Rehabilitation Foundation provided 86% : 28,668.00 USD.
- The Fred Hollows Foundation provided 14% : 4,717.00 USD.

**Partners:**

- Oudomxay Provincial Public Health Department, Provincial Hospital and Eye Unit.

**Team work:**

- Oudomxay provincial team, ENT doctor from Mittaphab 150 beds hospital and local staffs.

**Sites and Duration:** For 5 days in 2 districts:

- Houn district, Oudomxay Province: 18-20 February 2013.
- Pakbeng distirct, Oudomxay Province: 21-22 February 2013.

**Objective:**

- Decrease the prevalence of blindness, deafness, dental cavities, pediatric diseases and maternal-infant mortality rate.
- Broaden the coverage of healthcare services for people in remote areas, ethnic minority groups and the urban poor.
- Improve health care service at district level.

**Activities and Methods:**

A team of health care professionals delivered mobile health care services in five main areas: ENT, dental, eye, expectant mothers and pediatric services. All services included experts and nurse assistants to examine patients by manual and automated equipment. Treatment and procedures were provided with excellent medicine and equipment.

**Results:** A total of 2,259 patients (Female: 1,186) were recorded, examined and treated in 2 district Hospitals and 2 primary schools. This included: E.N.T. 369 cases (F 183), dental: 494 cases (F 257), eye: 465 cases (F 219), (performed cataract surgery 76 cases), expectant mothers: 105 cases (5 cases were declared problematic, pediatric: 407 cases (F 231) and children in primary school 393 (F 182).

**Conclusion:** This important mission helped the treatment and prevention of health problems for many Lao poor people. Many of the diseases encountered are treatable and preventable. The number of incidences of blindness, deafness, dental cavities, pediatric infection and expectant mother problematic issues is extremely high in these remote areas and will continue to go untreated without the intervention of a mobile healthcare team.

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# **PART I INTRODUCTION**

## **I. BACKGROUND INFORMATION**

### **1. STATEMENT OF THE MISSION**

The health care in rural area is a major problem for the Ministry and Department of Health, especially regarding E.N.T, dental, eye, expectant mother and pediatric services. Many patients have not yet received treatment in highly remote areas such as in the Northern Provinces of Laos. Accessing healthcare services include the following major barriers:

- Limitation of government funds allocated to eye, ENT, dental, obstetric and pediatric care in remote area.
- Limitation of education and medical instruments for eye, ENT, dental, obstetric and pediatric care on a district level.
- Distance and limited accessibility to hospitals.
- Travel to provincial hospitals is unaffordable for many villagers.
- Limited patient awareness of the availability of primary eye, ENT, dental, obstetric and pediatric care.
- Continued practice of traditional medicine.

The healthcare of expectant mothers and children is a priority for the ministry of public health and provincial public health in Laos and is not much available at district level despite occasional support from one organization which provides vaccination, vitamin A, and parasite medication.

Houn and Pakbeng are 2 impoverished districts of Southern Oudomxay province. Both district hospitals have limited access to eye, ENT, pediatric and obstetric trained care providers and medical equipment. Although Pakbeng district houses an International clinic staffed by foreign health care volunteers and provides limited access to medicine, it stills greatly lack of essential health care resources.

Beginning in 2008, in cooperation with Oudomxay Hospital, the Lao Rehabilitation Foundation, funded several missions for ENT, eye, dental care, pediatric, internal medicine and expectant mother services in the remote areas of four Northern provinces of Laos, including Phongsaly, Luang Namtha, Oudomxay and Bokeo provinces. For Oudomxay, LRF funded 8 missions servicing all districts. The outcome of these missions has been highly successful, treating over 25,500 patients who otherwise could not have afforded healthcare. LRF has also provided medical equipment with training for local staff of district hospitals of the 4 Northern provinces of Laos to assist in the development of a sustainable health care system with good service the district level.

This healthcare mission was important and necessary for the continued success of preventive healthcare to decrease the maternal, infant and child mortality rate in remote area. This mission was a partnership between the Oudomxay Provincial Public Health Dept., in cooperation with the Lao Rehabilitation Foundation (LRF) and the Fred Hollows Foundation (FHF).

## **II. TITLE OF THE MISSION**

“Mobile Health Care for Dental, E.N.T., Eye, Expectant Mothers and Pediatric Services in the Remote Areas of Houn and Pakbeng Districts, Oudomxay Province, Lao PDR”.

### III. OBJECTIVE

- Decrease the prevalence of blindness, deafness, dental cavities and the maternal-infant mortality rate.
- Broaden the coverage of health services for people in remote areas, ethnic minority groups and the urban poor.
- Human resource development for Lao doctors and staff and appropriation of medical instrument to district hospitals.

### IV. TARGET

- Service all patients free of charge, with no regard to gender, age, ethnicity or religion for ENT, dental, eye, internal medicine, expectant mothers and pediatric health care. Provide service to a total target of 2,390 patients in 2 districts.

### V. LOCATION AND DURATION

Services were provided during 5 days (February 18-22, 2013) in the two districts of:

- Houn district, Oudomxay province: February 18-20, 2013
- Pakbeng district, Oudomxay province: February 21-22, 2013

### VI. SUPPORT DONOR, TEAMWORK AND PARTNERS

#### 1. Support Donor

- Mainly provided by: Lao Rehabilitation Foundation
- Some support provided by: Fred Hollows Foundation

#### LAO REHABILITATION FOUNDATION (LRF):



The Lao Rehabilitation Foundation, Inc. (LRF) headquartered in Napa, California, USA, is a non-profit, non-religious, non-political organization. Activities are conducted by its President, Dr. Luc Janssens. LRF maintains an office in Vientiane, and in Oudomxay, Laos. The purpose of LRF is to provide medical services to Laotian citizens, with a greater focus on children. The foundation recognizes that the best guarantee for sound health is adequate nutrition, access to clean water, basic hygiene, decent shelter, education and reasonable access to medical facilities. The Foundation has conducted several missions in the remote areas of Laos providing medical services and clean water to the poor. The Foundation has also provided mobile medical equipment for dental, E.N.T and eye care. LRF is working in partnership with National Science Council (NSC) Government's Office, under a MOU signed June 20<sup>th</sup>, 2011.

#### FRED HOLLOWES FOUNDATION (FHF):



**The Fred Hollows Foundation** The Fred Hollows Foundation (FHF) headquartered in Sydney, Australia, is a non-profit, non-government organization. FHF maintains an office in Oudomxay province. The Foundation aims to reduce avoidable blindness in Lao PDR. FHF signed a MOU with the Ministry of Health of Lao PDR on Sept, 2008 for a duration of 3 years. The agreement was extended for 2 years (2011-2013). Activities include research, human resource development, infrastructure development, disease control, and the strengthening of advocacy partnerships for 4 Northern provinces of Laos (Phongsaly, LuangNamtha, Oudomxay and Bokeo).

## 2. Teamwork

The team of 25 people included:

### 2.1 Lao Team (22)

From Oudomxay Hospital (12):

- Ophthalmologist 01 (Head of Lao Team)
- Dentist 02
- Pediatrician 01
- Ophthalmic nurses 03
- Nurse assistants 05

From LuangPrabang (1):

- Ophthalmologist 01

Mittaphab Hospital, Vientiane Capital (1):

- E.N.T doctor 01

Local Staff (8):

- Medical doctor 01
- Nurse assistants 07

### 2.2 USA team (2)

- President of LRF 01 (Monitoring and Evaluation)
- Lao coordinator 01

### 2.3 Fred Hollows (1)

- Assistant 01

(Detail on attached files)

## 3. Partners

- Oudomxay Provincial Public Health Department, Provincial Hospital and Eye Unit.

## **PART II METHODOLOGY**

### **I. PREPARATION**

- Cooperated in partnership with the provincial and district hospitals.
- Wrote a proposal to inform local authorities of the purpose, planned activities and got agreement from Oudomxay Public Health (PoH) and Oudomxay provincial hospital.
- Appointed patients by advertising and by informing them from district hospitals to villages.
- Prepared budget, equipment, supplies, medicine, and assembled a team.

### **II. ACTIVITIES PERFORMED**

Provided mobile health care services in 2 districts hospitals (Houn and Pakbeng districts of Oudomxay province). Registration of cases was completed by local staff. Examination and diagnosis was performed with manual or automated equipment. Patients were treated with medicine or surgical procedures. Services were provided in 5 main areas of health care as follows:

#### **1. Examination and treatment of E.N.T diseases:**

The E.N.T. team (1 E.N.T. doctor from Mittaphab Hospital assisted by 1 E.N.T. nurse) performed the following activities:

- Screen with audio tests.
- Treat otitis media.
- Remove foreign body from E.N.T.
- Treat E.N.T. infections.

#### **2. Examination and treatment of dental diseases:**

The dental team (2 dentists from Oudomxay hospital assisted by 3 dental nurses) performed the following activities:

- Tooth extractions.
- Treatment of cavities.
- Calciferous cleaning.
- Application of fluoride varnish.
- Health education for children at primary school and distribution of toothbrushes and toothpaste.

#### **3. Examination and treatment of eye diseases:**

The eye team (2 ophthalmologists assisted by 3 ophthalmic nurses), performed the following activities:

- Vision test by E-Chart or Snellen Chart.
- Diagnosis with medicinal treatment for some eye diseases.
- Refractive service with donation of glasses.
- Eye disease surgery when needed.
- Cataract surgery with implant IOL.
- Health education of primary eye care and post-operative procedures.

4. **Examination of expectant mothers:**

Obstetric Team (1 radiologist from Oudomxay hospital assisted by 1 local OB nurse and local doctors) performed the following activities:

- General examination.
- Examination of fetus by Echography.
- Health education and advice for follow up hospital visits.

5. **Examination of infants and children:**

Pediatric team (1 pediatrician from Oudomxay hospital, assisted by 1 nurse) performed the following activities:

- General pediatric examination.
- Diagnosis of infectious disease and medicinal treatment.
- Health education.

6. **Dental screening of children at primary schools**

A team of USA with local assistant nurses performed the following activities at two primary schools, mixed and Khmou ethnicities schools:

- Visual acuity test
- Dental examination
- Dental care education
- Donation of toothbrushes and toothpaste
- Fluoride varnish application

7. **District Hospital Development Activities Performed**

Provide medical equipment to Houn and Pakbeng district hospitals with training of local staff in the use of donated ultrasound equipment to examine fetus and internal organs.



## PART III RESULTS

A total of 2,259 cases (female: 1,186 or 52.5%) were treated free of charge for all patients with no regard to gender, age, ethnicity or religion as follows:

No	Treatment	Number of patients examined and treated		
		Houn district	Pakbeng district	Total
1	E.N.T.	224	145	369
2	Dental	305	189	494
3	Eye	283	182	465
4	Infant and Child	201	206	407
5	Pregnancy	71	34	105
6	Adult (by ultrasound)	14	12	26
7	Children at Primary School	0	393	393
	<b>Total</b>	<b>1,098</b>	<b>1,161</b>	<b>2,259</b>

### 1. E.N.T. Results:

369 (F 183) patients were examined and treated as follows:

- Otitis media (Chronic) 121
- Otitis media (Serum) 72
- Neuro sensorial hearing loss: 32
- Rhinitis 24
- Tonsillitis/ Pharyngitis: 19
- Otitis media (Acute) 18
- Polyps 11
- Otitis external 09
- Other 63

### 2. Dental Results

494 (F 257) patients were examined and treated as follows:

- Extractions: 214 cases
- Treatment of cavities: 199 cases
- Calciferous cleaning: 81 cases

### 3. Eye Results

465 (F 219) patients were examined and treated in the two districts of Houn and Pakbeng. Vision tests with diagnostic examinations were also provided. Surgery was provided for 97 patients. Eye cases included:

- Cataract surgery 76 cases
- Pterygium excision, eyelid correction: 21 cases.

130 refractive services were performed and 33 pairs of glasses were distributed for refractive error (myopia and hyperopia).

#### **4. Obstetric Results:**

105 pregnant patients were examined by echography in the 2 districts of Houn and Pakbeng. 5 cases (4.8%) were declared problematic:

– Twins	3
– Anencephaly	1
– Placenta Previa	1

All problematic cases were advised to follow up at the provincial hospital.

#### **5. Pediatric Results:**

407 (F231) children or infants were examined. The main diseases were:

– Diarrhea:	95
– Pharyngitis+Tonsillitis	83
– Cold fever:	78
– Parasites:	76
– Pneumonia:	37
– Skin infection:	27
– Malnutrition:	03
– Anemia (Thalasemia):	04
– Down Syndrome	02
– Cerebral Palsy	02

#### **6. Primary School Screening Results:**

393 children (F 182) were screened at two primary schools in Pakbeng district (1 school Khmou and 1 school mixed ethnicities, Hmong, Khmou and Lao Loum). Findings are as follows:

- 100% of children had a good vision
- 65% of children in mixed ethnicities school had severe dental caries
- All children received fluoride varnish application

#### **7. District Hospital Development Activities Results:**

Provided the important and necessary medical equipment to Houn and Pakbeng district hospitals (detail on attach files).

Training for local staff was provided as follows:

- How to use ultrasound machine for local doctors of Houn and Pakbeng districts.
- How to use donated equipment for expectant mother, pediatric care, ultrasound echography, auto sphygmomanometer and other medical equipment at Pakbeng district hospital.

## PART IV BUDGET AND EXPENDITURE

The total actual expenditure of **33,385.00 USD** (thirty three thousand three hundred and eighty five USD) included:

– Instruments and equipment	\$12,650
– Transportation of equipment from USA	\$1,000
– Medicine (drugs)	\$7,895
– Transportation and accommodation of LRF team	\$3,090
– Transportation, food and accommodation of Lao team	\$1,782
– Preparation of the mission	\$279
– Rental of vehicles and fuel	\$1,260
– Toothpaste, toothbrushes and educational materials	\$715
– Medicine and supplies for eye service	\$4,714

**Note:** Medicine and supplies for the eye service part of this mission was provided by Fred Hollows Foundation and LRF.  
Some eye equipments and eye medical was provided by Lao Rehabilitation Foundation.

(Details on attached files).

## PART V

### ACCOMPLISHMENTS, WEAKNESSES AND RECOMMENDATIONS

#### I. Accomplishments:

- Good cooperation with government office at provincial and district levels.
- LRF provided a good ultrasound machine to Pakbeng district and educated the local staff on examination techniques.
- Poor patients who otherwise would not have access to healthcare in remote areas have received treatment.
- We contributed to the prevention of ear and dental diseases; we restored or improved visual ability and helped decreasing infant and maternal mortality.
- We provided an assessment of needs for the dental health care of children at primary schools in Pakbeng district of Oudomxay province.

#### II. Weaknesses:

- Lao coordinator from Oudomxay could not spend enough time to prepare the mission.
- E.N.T doctors from Oudomxay hospital were unable to join the mission.
- The number of patients serviced is 94% of target.
- There is an excellent international clinic in Pakbeng district staffed by foreign volunteers that takes care of patients in that area, thus minimizing the need for LRF to provide health care in the region.

#### III. Recommendations:

- Preferably provide service in remote area with limited health care.
- Extend duration of the mission.
- Oudomxay coordinator should allow more time to adequately prepare the next mission.

**PART VI**  
**NEXT MISSION PLANNING**  
(under consideration)

**ACTIVITIES:**

1. Hyperthyroid (goiter) surgery, cleft lip/cleft palate and neck surgery
2. Treat cataract, the leading cause of blindness by IOL surgery in addition to pterygium and eyelid surgeries and treat the leading cause of visual impairment by refractive service.
3. Provide treatment and prevention of otitis media, the main cause of deafness.
4. Provide treatment of dental cavities by fillings and prevention by calciferous cleaning and fluoride varnish application in schools.
5. Provide examination of pregnant women by echography.
6. Provide prevention and treatment of infectious disease in children.
7. Provide professional development opportunities for Lao doctors and staff and medical instrument to district hospitals.
8. Screen primary schools children for general health, and particularly for eye, dental and ENT care.
9. Provide clean water access to a village to be selected.

**LOCATION:**

- At Oudomxay Provincial Hospital
- In Mai district, Phongsaly province
- In Bountai district, Phongsaly province

**DURATION:**

- June 2013 and October 2013

President of Lao Rehabilitation  
Foundation (LRF)



Dr. Luc Janssens

Presenter

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**PART VII**  
**ATTACHMENT DOCUMENTS**

1. Photo of Activities
2. Teamwork
3. List of Expenditures
4. List of Medical Equipment and Medicine Donated to District Hospitals
5. List of Thank You Letters
6. List of Information and Approval Letters