

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

REPORT OF MOBILE HEALTH CARE

For Dental, E.N.T., Eye, Internal Medicine, Expectant Mothers and Pediatric Services in the Remote Areas of

**Mai, Samphan and Bountai Districts
Phongsaly Province, Lao PDR.
3-11 February 2014**



**A Cooperation Between
Oudomxay and Phongsaly Provincial Hospitals**

and

**Lao Rehabilitation Foundation (LRF)
Fred Hollows Foundation (FHF)**

ABSTRACT

Title: “Mobile Health Care for Dental, Ear, Nose and Throat, (E.N.T.), Eye, Internal Medicine, Expectant Mothers and Pediatric Service in the Remote Areas of Mai, Samphan and Bountai Districts, Phongsaly Province, Lao PDR”.

Support Donors: Lao Rehabilitation Foundation, Inc. and Fred Hollows Foundation.

Anticipated Budget: The anticipated budget for this mission was 53,674 USD.

Actual Expenditure: The actual expenditure for this mission was 51,410 USD.

Actual Budget Funding:

- The Lao Rehabilitation Foundation provided: 49,277 USD.
- The Fred Hollows Foundation provided: 2,133 USD.

Partners:

- Oudomxay and Phongsaly Provincial Public Health Department, Provincial Hospital and Dental, Eye, Gynecology, Pediatric Units.

Team work:

- A total of 27 people. Experts from USA joined the Oudomxay and Phongsaly provincial team and local staffs.

Sites and Duration: For 7 days in 3 districts:

- Mai district, Phongsaly Province: 4-6 February 2014.
- Samphan district, Phongsaly Province: 7-8 February 2014.
- Bountai district, Phongsaly Province: 9-10 February 2014.

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 six main areas: dental, E.N.T., eye, internal medicine, expectant mothers and pediatric services, providing service to all patients free of charge, with no regard to gender, age, ethnicity or religion.

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 3,772 patients (Female: 2,140) were recorded, examined and treated in 3 district Hospitals. This included: dental 1,114 cases (F 647), E.N.T. 617 cases (F 332), eye 725 cases (F 277), expectant mothers 142 cases, pediatric 618 cases (F 383), internal medicine 415 (F 268), and children in primary school 142 (F 64).

42 cases required surgery, this included: 24 cataract surgery, 13 Pterygium, eyelid surgery, 3 cleft lip and 2 cyst/tumor surgery.

Conclusion: This important mission helped the treatment and prevention of health problems for many poor Lao people. Many of the diseases encountered are treatable and preventable access to health care in district levels is extremely limited. It is difficult for mothers to diagnose diseases and follow through with the proper treatment. Specialists and diagnostic equipment are also severely limited.

The number of incidences of blindness, deafness, dental cavities, pediatric infection and expectant mother with problematic issues is extremely high in these remote areas and will continue to go untreated without the intervention of a mobile healthcare team.

- Refer to the agreement letter of Phongsaly Provincial Public Health Department No.40/PoH of October 15th 2013.
- Refer to the agreement letter of Minister, Ministry of Public Health No. 0063/MoH of January 09th 2014.
- Refer to agreement letter of Administration Office Department, Ministry of Foreign Affair No. 090/MoFA.NGOs. 3.12 of January 17th 2014.

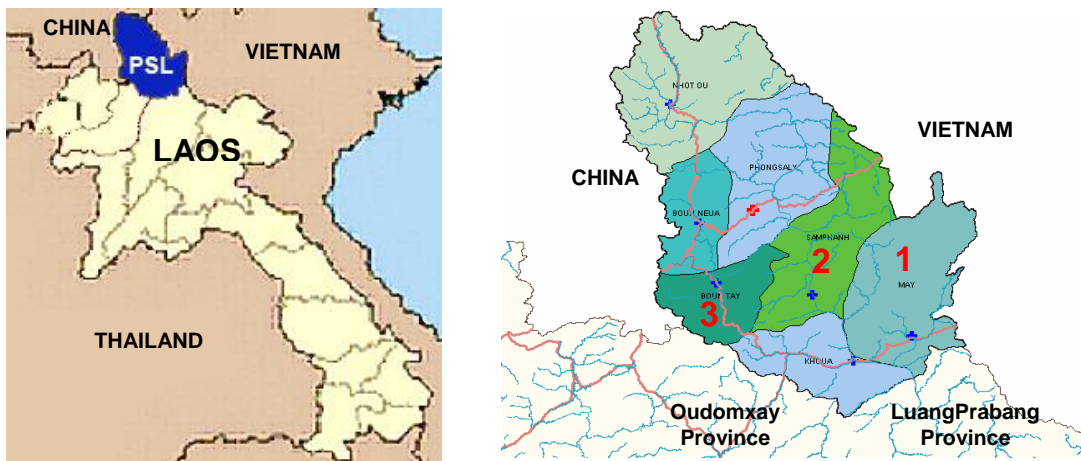
II. BACKGROUND INFORMATION

1. Phongsaly Province

Phongsaly Province is one of the remotest of the Lao PDR provinces. It is dominated by mountainous terrain covering 95% of the land with an abundance of forests. The province is divided into seven districts consisting of 542 villages. The roads to most villages are in very poor condition and driving is challenging which makes access to these villages difficult. 198 of the villages in Phongsaly province have no road access at all. 43% are far below poverty level.

The population of 172,286 consists of many ethnic groups such as Khmu, Yao, Phounoy Hor, Ekor, Akha, Tai Dum, Leu, Hmong and others, each with their own identity, culture, traditions, costumes and languages. The majority of people living in remote areas are poor. The struggling economy is mainly farming and agricultural; tea being the main export.

Map of Laos and Phongsaly Province:



The public healthcare system of the province is extremely underdeveloped. It consists of one provincial hospital, one military hospital, six district hospitals and 29 healthcare centers providing service to the entire population. The challenge of proper healthcare is further exasperated by the remoteness of villages as well as by the lack of medical personnel and diagnostic equipment.

2. Mai, Samphan and Bountai Districts, Phongsaly Province:

Three districts are having extremely limited access to healthcare, especially Samphan district which is the poorest of 47 districts of Laos. It is particularly poor because of its geographical location, limited infrastructure and populated by many poor ethnic minorities.

Table 1. The population and health system of three districts

No.	District	Population	MD's	Nurses	Health Centers	Villages
01	Mai	24,496	2	18	5	88
02	Samphan	23,222	1	15	4	71
03	Bountai	22,496	2	14	5	65
	Total:	70,214	5	47	14	224

These districts are particularly limited in medical doctors, medicine, diagnostic equipment and treatment options. Only primary treatment is available and patients must often be referred to healthcare centers in other parts of the country.

3. 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.

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. The outcome of these missions has been highly successful, treating over 28,500 patients who otherwise could not have afforded healthcare.

In Phongsaly, LRF funded 1 mission in 2010 servicing 2 districts (Bounneu and Bountai).

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 at district level, including Phongsaly provincial hospital where LRF has provided two ultrasound machines and medical supplies.

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, Phongsaly Provincial Public Health Departments in cooperation with the Lao Rehabilitation Foundation (LRF) and the Fred Hollows Foundation (FHF).

III. OBJECTIVE:

- Decrease the prevalence of dental cavities, internal medicine disease and the maternal-infant mortality rate.
- Broaden the coverage of health care services for people in remote areas, ethnic minority groups and the urban poor.
- Provide human resource development for Lao doctors and staff, and an appropriation of medical instrument to district hospitals.

IV. TARGET

- Service all patients free of charge, with no regard to gender, age, ethnicity or religion.
- Service patients in need of dental care.
- Service expectant mothers and their children.
- Provide service to a total estimated target of 2,240 patients in 3 districts.

V. LOCATION AND DURATION

Services were provided during 7 days (February 04-10, 2014) in the three districts of:

- February 4-6, 2014 at Mai district hospital
- February 7-8, 2014 at Samphan district hospital
- February 9-10, 2014 at Bounneua district hospital

VI. SUPPORT DONORS, TEAMWORK, PARTNERS and INSTRUMENTS

1. Support Donors

- 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 20th, 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 27 people included:

2.1 Lao Team (22)

From Oudomxay Hospital (11):

- Ophthalmologist 01 (Head of Lao Team)
- Dentists 02
- Pediatrician 01
- Gyneagologist 01
- Ophthalmic nurses 02
- Assistant nurses 04

From Phongsaly (2):

- Ophthalmologist 01
- Radiologist (ultrasound doctor) 01

From Sing district (LuangNamtha province) (1):

- Medical doctor (pediatric assistant) 01

Local Staff (8):

- Medical doctor 01
- Assistant nurses 07

2.2 USA team (5)

- President of LRF 01 (Monitoring and Evaluation)
- Specialist Internal Medicine 01
- Specialist Pediatrician 01
- Plastic surgeon, ENT doctor 01
- Lao coordinator 01

3. Partners

- Oudomxay, Phongsaly Provincial Public Health Departments, Provincial Hospitals.

4. Instrument and Medicine

This mission was performed using up to date medical equipment intended for mobile healthcare and medicine of good quality was provided for treatment. It included:

1. Instruments and medicine for dental service.
2. Instruments and medicine for ENT service.
3. Instruments and medicine for eye service.
4. Instruments and medicine for internal medicine service.
5. Instruments and medicine for expectant mothers.
6. Instruments and medicine for pediatric services.
7. Instrument and fluoride for student at primary school.

VII. RESPONSIBLE UNITS

1. Phongsaly Provincial Public Health Departments

- Provided official agreement.
- Provided location and appointment information to patients in remote areas.
- Cooperated with and organized the local staff to join the mobile team.

2. Oudomxay Provincial Public Health Department

- Provided the Lao team from Oudomxay provincial hospital.

3. Lao Rehabilitation Foundation

- Provided medical instruments and medicine for the mission.
- Provided transportation and accommodations for the Lao and US teams and per diem for Lao team
- Covered cost of treatment and hospital stay in some cases, as necessary.

VIII. METHODOLOGY

1. PREPARATION

- Wrote a proposal to inform local authorities of the purpose, planned activities and get agreement from Phongsaly Public Health (PoH), Ministry of Health (MoH) and Ministry of Foreign Affairs (MoFA).
- Appointed patients by advertising and by hospital and outreach information.
- Prepared budget, equipment, supplies, medicine, and assemble a team.

2. ACTIVITY PERFORMED

Provided mobile health care services in 3 districts hospitals (Mai, Samphan and Bountai districts of Phongsaly 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:

2.1 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.

2.2 Examination and treatment of E.N.T diseases:

The E.N.T. team (1 E.N.T. doctor from USA assisted by Lao medical doctor) performed the following activities:

- Screen with audio tests.
- Treat otitis media.
- Remove foreign body from E.N.T.
- Treat E.N.T. infections.
- Cleft lip and tumor surgery

2.3 Examination and treatment of eye diseases:

The eye team (2 ophthalmologists assisted by 2 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.

2.4 Examination of adult for internal medicine diseases:

- General adult examination.
- Glycemia test and examination of internal organs by ultrasound echography.
- Diagnosis of diseases and medicinal treatment.
- Health education.

2.5 Examination of expectant mothers:

Obstetric Team (1 gynecologist from Oudomxay hospital, 1 radiologist from Phongsaly hospital assisted by 1 local OB nurse) performed the following activities:

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

2.6 Examination of infants and children:

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

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

2.7 Dental screening of children at primary schools

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

- Dental examination
- Dental care education
- Application of fluoride varnish.
- Health education for children at primary school and distribution of toothbrushes and toothpaste.

2.8 District Hospital Development Activities Performed

Provided medical equipment to Mai, Samphan and Bountai district hospitals. Also provided training in the use of donated ultrasound diagnostic equipment to the staff of Phongsaly and Oudomxay provincial hospitals and Samphan district hospital to examine fetus and internal organs.

2.9 Rehabilitation Activities Performed

- Referred cases to Oudomxay provincial hospital for treatment supported by LRF.
- Rehabilitated a baby diagnosed with severe sepsis which required oxygen and albuterol nebulizer treatments.

IX. RESULTS

A total of 3,906 patients were registered, a total of 3,772 cases (female: 2,140 or 57%) 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			
		In Mai	In Samphan	In Bountai	Total
1	Dental	306	489	317	1,112
2	E.N.T.	167	213	237	617
3	Eye	218	233	275	726
4	Internal medicine (adult)	209	85	121	415
5	Pregnancy	46	29	67	142
6	Infant and Child	180	176	262	618
7	Children at Primary School	0	0	142	142
	Total	1,103	1,242	1,285	3,772

1. Dental Results

1,112 (F 674) patients were examined and treated as follows:

– Extractions	502
– Extractions with Calciferous cleaning	186
– Treatment of cavities	227
– Calciferous cleaning	194

2. E.N.T. Results:

617 (F 332) patients were examined and treated as follows:

– Otitis media (acute)	138
– Neuro sensorial hearing loss	135
– Pharyngitis	100
– Otitis media (Chronic)	87
– Ear pain	36
– Rhinitis	27
– Polyp nose/Tinitis	21
– Ear foreign body	20
– Allergy	18
– Tonsillitis	07
– Goiter	05
– Other	44

ENT surgeries performed:

– Cleft lip surgery	03
– Cyst/tumor	02

3. Eye Results

725 (F 277) patients were examined and treated in the three districts of Mai, Samphan and Bountai. Vision tests with diagnostic examinations were also provided. Surgery was provided for 37 patients. Eye cases included:

• Cataract surgery	24
• Pterygium excision, eyelid correction:	13

86 refractive services exams were performed and 54 pairs of glasses were distributed for refractive error (myopia and hyperopia).

4. Internal Medicine (adult) results:

415 (F 268) patients were examined. The main diseases were:

– Gastritis	163
– Musculoskeletal pain	153
– Anemia	122
– Parasite	104
– HTA	56
– Belly pain	55
– Pneumonia/bronchitis	23
– Flank pain	21
– Vitamin deficiency	18
– Overweight	17
– Vaginitis	15
– Smoker	13
– Diabetic	10
– Kidney stone	09
– TB	09
– Goiter	07

5. Obstetric Results:

142 pregnant patients were examined by echography in the 3 districts of Mai, Samphan and Bountai. 6 cases (4.2%) were declared problematic:

– Twins	1
– Anencephaly	1
– Placenta Previa	2
– Transverse presentation of fetus	2

One case was referred to Oudomxay provincial hospital and other problematic cases were advised to follow up at the provincial hospital.

6. Pediatric Results:

618 (F383) children or infants were examined. The main diseases were:

– URI	23%
– Malnutrition	11%
– Parasites	11%
– Otitis/Chronic Drainic otitis	7.2%
– Pharyngitis	6.9%
– Diarrhea	5.8%
– Skin infection	3.4%
– Pneumonia/Bronchitis/Bronchiolitis	3.3%
– Cough/possible asthma	3.0%
– Myalgias	1.7%
– Scabies	1.5%
– Caries/Tooth Abscess	1.3%
– Eczema	1.2%
– Seizures	1.1%
– Urinary Tract Infections	1.1%
– Inguinal Hernias	1.0%
– Anemia	0.9%
– Cerebral Palsy	0.7%
– Thiamine deficiency	0.7%
– Profound Hearing Loss	0.5%
– Check-ups	9.4%

7. Primary School Screening Results:

142 children (F 64) were screened at two primary schools in Bountai district (1 school Keua and 1 school Khmou). All children received fluoride varnish application with distribution of toothbrushes and toothpaste.

8. District Hospital Development Activities Results:

Provided modern important and necessary medical equipment to 3 district hospitals and 2 provincial hospitals (detail on attach files).

Training for local staff was provided as follows:

- How to use ultrasound machine, oxymeter, oxygen concentrator for local nurses and doctors of Samphan district and Phongsaly provincial hospital.

9. Rehabilitation Activities Performed

- An anencephaly case was referred to Oudomxay provincial hospital for treatment supported by LRF.
- Rehabilitated a baby which was severe pneumonia, bronchitis with sepsis and required oxygen and albuterol nebulizer treatments.

X. BUDGET AND EXPENDITURE

The anticipated budget for this mission was **53,674 USD** (fifty three thousand six hundred and seventy four USD).

The actual expenditure for this mission was **51,410 USD** (thirty one thousand four hundred and ten USD) included:

– Instruments and equipment	\$ 20,750
– Medicine (drugs)	\$ 10,207
– Transportation and accommodation of LRF team	\$ 11,768
– Transportation, food and accommodation of Lao team	\$ 2,458
– Preparation of the mission	\$ 646
– Rental of vehicles and fuel	\$ 1,710
– Toothpaste, toothbrushes and educational materials	\$ 238
– Medicine and supplies for eye service	\$ 2,133

Note: Medicine and supplies for the eye service part of this mission was provided by Fred Hollows Foundation and LRF.

(Details on attached files)

XI. ACCOMPLISHMENTS, CHALLENGES, WEAKNESSES AND RECOMMENDATIONS

1. Accomplishments:

- We treated impoverished patients who otherwise would not have received help.
- We helped prevent cavitas dentitis, deafness, blindness and infant and maternal mortality in Phongsaly province.
- The number of patients was higher than our original projections.
- LRF provided a good ultrasound machine to Samphan district and trained the local staff on examination techniques.
- We provided education and hands-on experience to Lao doctors who worked together with the team of US doctors.
- We provided support with basic medical instruments and medicine for 3 district hospitals and for Phongsaly and Oudomxay provincial hospitals.

2. Challenges

- Most people we have seen are living in rural and remote area without road access, in multicultural settings with low education, in nature dependent lifestyle and livelihoods.
- Limited government budget allocations particularly for poverty reduction.
- Many people still lack access to the most basic health care.

3. Weaknesses:

- The number of patients registered or on waiting list was higher than expected, thus the team of internal medicine could not provide service to all patients.
- Local staff experienced difficulty to register patients which in turn made it difficult for the team to provide service efficiently.
- LRF could not donate an ultrasound machine to Bountai district hospital, because of the limited number of medical doctors to use.

4. Recommendations:

- Preferably provide service in remote area with limited health care.
- Expend duration of service at difficult location.
- Consider expanding the teamwork for internal medicine service.

XII. NEXT MISSION PLANNING (under consideration)

ACTIVITIES:

1. Provide treatment and prevention of otitis media, the main cause of deafness.
2. Provide treatment of dental cavities by fillings and prevention by calciferous cleaning and fluoride varnish application in schools.
3. 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.
4. Provide examination of pregnant women by echography.
5. Provide prevention and treatment of infectious disease in children.
6. Provide professional development opportunities for Lao doctors and staff and medical instrument to district hospitals.
7. Screen primary schools children for general health, and particularly for eye, dental and ENT care.

LOCATION:

- In Long, Sing districts, LuangNamtha province

DURATION:

- October 2014

President of LRF



Dr. Luc Janssens

Presenter

ດຣ. ເພັດສະໝອນ ອິນດາລາ
Phetsamone INDARA, MD.

ATTACHMENT DOCUMENTS

1. Photo of Activities
2. Teamwork
3. List of Donated Medical Equipment
4. List of Information and Approval Letters
5. List of Expenditure