# REPORT OF MOBILE HEALTH CARE

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

Nga, Beng and Houn Districts Oudomxay Province, Lao PDR.

And

**EAR, NOSE & THROAT and PLASTIC SURGERY** 

At

Oudomxay Provincial Hospital LAO, PDR

February 2012

National Science Council (NSC)
Government's Office

**Oudomxay Provincial Hospital** 

In Partnership with

Lao Rehabilitation Foundation



#### **PREFACE**

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

These problems are a challenge to providing care for patients in remote areas. Poor healthcare contributes to the stagnation of economic development and social affairs of the country. This is especially true in the Northern provinces of Laos and particularly in Oudomxay province.

In the past, a few NGOs and foundations have provided funding to develop health care in rural areas. Particularly, Lao Rehabilitation Foundation started in 2008 by providing medical equipment and medicine to healthcare centers, district hospitals and provincial hospitals in Northern provinces. The LRF has also provided funding to improve the overall health of people in remote villages by giving them access to clean drinking water and mobile healthcare.

This mission was a good opportunity to help for the treament and prevention of deafness, otitis media, cavitas dentis, blindness, hyperthyroid, cleft lip/cleft palate, burn and traumatic scar. This mission decreased the mortality rate of mother and child and the number of health problems in Northern Laos, while helping Lao doctors and local staff to develop new skills.

On behalf of the Lao Public Health system and the Lao people, especially of the 4 Northern provinces (Phongsaly, Luang Namtha, Oudomxay and Bokeo provinces), I would like to thank Lao Rehabilitation Foundation's president Dr. Luc Janssens for his ongoing support to provide health care to the poor in remote areas and for assisting local medical staff develop new skills since 2008. Thank you so much also to Fred Hollows Foundation for providing funds for the eye care part of this mission. With many thanks also to the Lao medical team, the official organizations, National Science Council Government's Office, Ministry of Health and Ministry of Foreign Affairs to be partners and in agreement for this mission.

I hope this good cooperation will continue to help Lao people in the future.

Warmest regards,

Dr. Khamphang Sayavong

Director of Oudomxay Provincial Public Health

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#### **ABSTRACT**

**Title:** Mobile Health Care for Dental, E.N.T., Eye Disease, Expectant Mothers and Pediatric Service in the Remote Areas of Nga, Beng and Houn Districts, Oudomxay Province, Lao PDR. and Ear-Nose-Throat and Plastic Surgery

#### **Oversight Unit:**

- National Science Council, Government's Office
- Ministry of Health and Ministry of Foreign Affairs
- Oudomxay Provincial Public Health Department, Provincial Hospital and Eye Unit.

**Sites:** In 3 districts (Nga, Beng and Houn), Oudomxay Province At Oudomxay Provincial Hospital

**Duration:** This mission was an 8 day mission, 01-08 February, 2012.

Anticipated Budget: The anticipated budget for this mission was 58,414.00 USD.

Actual Budget: The actual budget for this mission was 64,231.00 USD.

#### Actual Budget Funding:

o The Lao Rehabilitation Foundation provided: 56,488.00 USD.

The Fred Hollows Foundation provided: 7,743.00 USD.

#### Objective:

- Decrease the prevalence of hyperthyroid (goiter), cleft lip/palate, blindness, deafness, cavitas dentis and maternal-infant mortality rate.
- Broaden the coverage of healthcare services for people in remote areas, ethnic minority groups and the urban poor.

**Methods:** Divided teamwork into two areas of focus:

**Teamwork 1:** Performed ENT and plastic surgery at Oudomxay provincial hospital. Surgeons from USA and Setthathirath hospital joined the Oudomxay provincial hospital team to perform hyperthyroid/goiter, cleft lip/palate and burn scar surgeries. Surgeries were performed by manual and automated equipment, treatment was provided by proper operating procedures and with good medicine. The teamwork provided pre-surgery, intrasurgery and post-surgery care.

**Team Work 2:** Provided mobile health care services in 3 districts hospitals (Nga, Beng and Houn), providing 5 main services: ENT, dental, eye, expectant mother and pediatric services. ENT specialist from Mittaphab Hospital joined Oudomxay provincial team to examine patients by manual and automated equipment. Treatment and procedures were provided with good medicine and equipment.

**Results:** A total of 3,643 patients (Female: 1,477) were examined, treated when possible and recorded in 3 districts and at Oudomxay Hospital. This included: E.N.T. 681 cases (19.0 %), dental: 1,362 cases (including 400 children in primary school) (37.0%), eye: 732 cases (20.0%), expectant mothers: 120 cases (3.0%) and pediatric: 681 cases (19.0%). Hyperthyroid/goiter, cleft lip/palate and burn scars 64 cases.

210 surgeries were performed, it included: hyperthyroid 8 cases, cleft lip/palate 3 cases, burn scars 19 cases, cataract 137 cases, pterygium and eyelid 43 cases. Post-surgery for all cases was completed without complications.

**Conclusion:** This important mission helped the treatment and prevention of health problems for many poor Lao people while improving new ENT and plastic surgery skills of Lao doctors.

#### AGREEMENT OFFICIAL LETTER OF OUDOMXAY GOVERNOR, MINISTRY OF HEALTH AND MINISTRY OF FOREIGN AFFAIRS



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ແຂວງອຸດົມໄຊ ຄະນະປະຈຳພັກແຂວງ

ເລກທີ່... 10.4. /ຄປພຂ. ອຸດົມໄຊ, ວັນທີ. 18... / 1. 2011.

ຮຽນ: ທ່ານລັດຖະມົນຕີ ກະຊວງສາທາລະນະສຸກ ທີ່ນັບຖື. ໂດຍຜ່ານຫ້ອງການ ກະຊວງສາທາລະນະສຸກ.

ເລື່ອງ: ຂໍອະນຸມັດ ໃຫ້ມູນນິທີຟື້ນຟູສຸຂະພາບ (Lao Rehabilitation Foundation, USA) ໂດຍສົມທົບກັບທິມງານແພດ ຈາກໂຮງໝໍແຂວງອຸດົມໄຊ ເຂົ້າມາຊ່ວຍເຫຼືອກວດ ແລະ ປິ່ນປົວພະຍາດຫຼ-ດັງ-ຄໍ, ແຂ້ວ, ແມ່ມານ ແລະ ເດັກນ້ອຍ ທີ່ ແຂວງອຸດົມໄຊ.

- ອີງໃສ່ໃບສະເໜີ ຂອງຄະນະພະແນກສາທາລະນະສຸກແຂວງອຸດົມໄຊ, ເລກທີ່ 1607/ພສທຂ, ລົງວັນທີ່ 28 ທັນວາ, 2011.
- ອີງໃສ່ຂໍ້ຫຍຸ້ງຍາກ ແລະ ຄວາມຕ້ອງການ ໃນວຸງກງານການພັດທະນາບຸກຄະລາກອນ ແລະ ການພັດທະນາພື້ນຖານໂຄງລ້າງໃຫ້ເຂັ້ມແຂງ ດ້ານສາທາລະນະສຸກຂອງແຂວງອຸດົມໄຊ ໂດຍສະເພາະແມ່ນຢູ່ຂັ້ນໂຮງໝໍເມືອງ.
- ອີງໃສ່ການຄົ້ນຄວ້າເຫັນດີຂອງຄະນະປະຈຳພັກແຂວງ ຄັ້ງວັນທີ່ 28 ທັນວາ, 2011.

ຄະນະປະຈຳພັກແຂວງ ແຂວງອຸດົມໄຊ ຂໍຖືເປັນກຸງດຮຸງນສະເໜີມາຍັງທ່ານ ຊ່ວຍຄົ້ນຄວ້າ ພິຈາລະນາ ອະນຸມັດໃຫ້ ມູນນິທີພື້ນຟູສຸຂະພາບ (Lao Rehabilitation Foundation, USA) ໂດຍມີປະທານມູນນິທີ ແລະ ແພດຊ່ຽວຊານຈາກຕ່າງປະເທດ ລວມຈຳນວນ 4 ທ່ານ (ລາຍຊື່ລະອຽດເອກະສານຕິດຂັດ) ສົມທົບກັບທິມງານແພດ ຈາກໂຮງໝໍແຂວງອຸດົມໄຊ ເຂົ້າ ມາຊ່ວຍເຫຼືອກວດ ແລະ ບິ່ນປົວພະຍາດຫູ-ດັງ-ຄໍ, ແຂ້ວ, ແມ່ມານ ແລະ ເດັກນ້ອຍ ທີ່ແຂວງອຸດົມໄຊ, ເປັນເວລາ 7 ວັນ, ເລີ່ມວັນທີ່ 02-08 ກຸມພາ(2), 2012. ກວດ ແລະ ບິ່ນປົວ ບໍ່ ໄດ້ເສຍຄ່າ (ລາຍລະອູງດເອກະສານຂັດທ້າຍ).

ສະນັ້ນ, ຈຶ່ງສະເໜີຮຽນມາຍັງທ່ານຊ່ວຍພິຈາລະນາ ຕາມຄວາມເໝາະສົມດ້ວຍ. ດ້ວຍຄວາມນັບຖືຢ່າງສູງ.

<u>ຄະນະປະຈຳພັກແຂວງ ແຂວງອຸດົມໄຊ</u>

ญหลา จับทะปั่นยา



#### ສາຫາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສັນຕິພາບ ອກະລາດ ປະຊາທິປະໄຕ ອກະພາບ ວັດທະນະກາວອນ 🕕 💆 🗸

ກະຊວງສາຫາລະນະສຸກ

ເລກທີ

/ກຊສ.

ນະຄອນຫຼວງວຽງຈັນ, ວັນທີ.....

1 9 JAN 2012

ຮຽນ: ທ່ານ ຮອງນາຍົກລັດກະມົນຕີ, ລັດກະມົນຕີວ່າການກະຊວງການຕ່າງປະເທດ <u>ທີ່ນະຄອນຫຼວງວຽງຈັນ</u>

ເລື້ອງ: ສະເໜີຂໍອະນຸມັດທີມງານແພດ Lao Rehabilitation Foundation ຂອງສະຫະລັດອາ ເມລິກາເຂົ້າມາເຄື່ອນໄຫວບໍລິການ ກວດພະຍາດ ຫູ, ດັງ, ຄໍ ແລະແຂ້ວໃຫ້ພໍ່ແມ່ປະຊາຊົນ ທີ່ ແຂວງອຸດົມໄຊ, ກຳນົດ ແຕ່ວັນທີ 2 ເຖິງ8/2/2012.

- ອີງຕາມເອກະສານຂອງຫ້ອງການສະພາວິທະຍາສາດແຫ່ງຊາດ, ສຳນັກງານນາຍົກລັດກະມົນຕີ ເລກທີ 491/10/ຫ.ກສວຊ, ລົງວັນທີ 19/12/2011.
- ອີງຕາມເອກະສານຂອງຄະນະປະຈຳພັກແຂວງອຸດົມໄຊ ເລກທີ 104/ຄປພຂ, ລົງວັນທີ 28/12/2011
- ອີງຕາມແຫນສະເໜີຂອງອົງການ Lao Rehabilitation Foundation , ລົງວັນທີ 1/12/2011.

ກະຊວງສາຫາລະນະສຸກ ຂໍກືເປັນກຽດສະເໜີມາຍັງຫ່ານຊາບວ່າ: ຫີມງານແພດຂອງ Lao Rehabilitation Foundation ສະເໜີເຂົ້າມາກວດບໍລິການ ຜ່າຕັດ, ປິ່ນປົວພະຍາດ ຫູ,ດັງ, ຄໍ ແລະແຂ້ວໃຫ້ ແກ່ພໍ່ແມ່ປະຊາຊົນໂດຍບໍ່ ໄດ້ເສຍຄ່າ ຫີແຂວງອຸດົມໄຊ, ຊຶ່ງມີກຳນົດ ແຕ່ວັນຫີ 2 ເຖິງ8 ກຸມພາ2012. ສ່ວນຄ່າໃຊ້ຈ່າຍຕ່າງໆຫັງໝົດ ໃນໄລຍະ ເຄື່ອນໄຫວກິດຈະກຳຕົວຈິງ ແມ່ນພາລະຂອງອົງການດັ່ງກ່າວຮັບຜິດຊອບ. ກະຊວງສາຫາລະນະສຸກເຫັນວ່າ ກິດຈະກຳ ນີ້ຈະເຮັດໃຫ້ປະຊາຊົນໄດ້ເຂົ້າເຖິງການບໍລິການກວດສຸຂະພາບດັ່ງກ່າວໄດ້ທີ່ວເຖິງຂຶ້ນກວ່າເກົ່າ ແລະ ເປັນການປະ ກອບ ສ່ວນໃນການສົ່ງເສີມສຸຂະພາບ ຫັງໄດ້ຮັບຜົນກະຫົບຫາງດ້ານດີຕໍ່ສຸຂະພາບ ຂອງພໍ່ແມ່ປະຊາຊົນອີກດ້ວຍ.

ດັ່ງນັ້ນ, ກະຊວງສາທາລະນະສຸກຈຶ່ງສະເໜີມາຍັງທ່ານ ເພື່ອພິຈາລະນາ ແລະອະນຸມັດຕາມທາງຄວນດ້ວຍ.

ລັດກະມົນຕີວ່າການກະຊວງສາທາລະນະສຸກ

ສາດສະດາຈານ ດຣ ເອກສະຫວ່າງ ວິງວິຈິດ



#### ສາຫາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊີນລາວ ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ກະຊວງການຕ່າງປະເທດ

ເລກທີ 0 4 0 6 /ຕປທ.ຈສກ.3.2

ນະຄອນຫລວງວຸເງຈັນ, ວັນທີ 26 ມັງກອນ 2012.

ຮຸເນ: ທ່ານ ລັດຖະມົນຕີວ່າການກະຊວງ ສາທາລະນະສຸກ,

ທີ່ ນະຄອນຫລວງວຽງຈັນ.

ເລື່ອງ: ການອະນຸມັດໃຫ້ຄະນະແພດ ຂອງມູນນິທີ (Lao Rehabilitation Foundation, LRF ) ເຂົ້າມາເຄື່ອໄຫວກວດພະຍາດ ຫູ, ດັງ, ຄໍ ແລະ ແຂ້ວ. ຢູ່ແຂວງອຸດົມໄຊ.

ກະຊວງການຕ່າງປະເທດຂໍຖືເປັນກູງດແຈ້ງມາຍັງທ່ານຊາຍວ່າ ໂດບອີງຕາມຈິດໝາຍສະເໜີຂອງ ກະຊວງສາທາລະນະສຸກ, ສະບັບເລກທີ 054/ກຊສ, ລົງວັນທີ 19 ມັງກອນ 2012 ກ່ຽວກັບການສະເໜີຂໍ ອະນຸມັດໃຫ້ຄະນະແພດ ຂອງມູນນິທີ (Lao Rehabilitation Foundation, LRF) ເຂົ້າມາເຄື່ອໄຫວກວດ ພະຍາດ ຫຼຸ, ດັງ, ຄໍ ແລະ ແຂ້ວ. ຢູ່ ແຂວງ ອຸດີມໄຊ. ຊຶ່ງມີກຳນິດ 07 ວັນ ( ແຕ່ວັນທີ 02 - 08 ກຸມພາ 2012 ), ກະຊວງການຕ່າງປະເທດເຫັນດີອະນຸມັດໃຫ້ກະຊວງສາທາລະນະສູກ ຮັບທຶນແພດດັ່ງກ່າວາຕາມ ການສະເໜີ.

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ເຊັນແທນລັດ<u>ທະມົນ</u>ຕີວ່າການກະຊວງການຕ່າງປະເທດ

ລັດຖະມົນຕີຊ່ວຍວ່າການ

ອາຊຸນແກ້ວ ກິດຕິຄຸນ

### LAO REHABILITATION FOUNDATION AND 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 at the Department of Public Health 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 HOLLOWS FOUNDATION (FHF):**



The Fred Hollows Foundation (FHF) headquartered in Sydney, Australia, is a non-profit, non-government organization. FHF maintains an office in Oudomxay

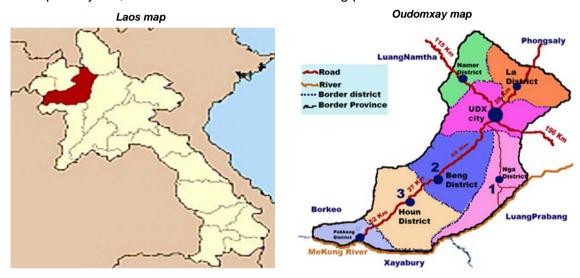
province. The Foundation aims to reduce avoidable blindness in Lao PDR. FHF signed a MOU with the Ministry of Health of Lao PDR on Sept, 2008 for a duration of 3 years. The agreement was extended for 2 years (2011-2013). Activities include research, human resource development, infrastructure development,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

### PART: I

#### I. BACKGROUND INFORMATION

#### 1. Background of Oudomxay Province

Oudomxay province is centrally located in the North of Laos and borderlines with LuangPrabang, Phongsaly, LuangNamtha, Bokeo and Xayabury provinces. The area counts 15,370 Km², 85% of the land being high mountains. Oudomxay province is divided into 7 districts, 472 villages (119 villages have no road access). The population numbers 285,274 people (2010) that includes 60% LaoTheung (Khmou), 25% LaoLoum and 15 % LaoSoong (Kmong). 85% of the population lives in remote areas and still live their traditional ethnic ways. The economy is mainly agricultural and farming. For 74.1% of the population, the income is lower than 2 USD per day. 13,111 families are recorded as being poor.



The public health system is extremely underdeveloped. There is only one provincial hospital, two military hospitals, six district hospitals and 40 healthcare centers providing service to the entire population. The challenge of proper healthcare is exasperated by the remoteness of villages and by the public health care system's limited access to medical doctors and diagnostic equipment.

#### 2. Nga, Beng and Houn Districts, Oudomxay Province:

Nga, Beng and Houn districts have a combined population of 130,927 people. The public health system includes three district hospitals and eighteen healthcare centers. These districts have extremely limited access to healthcare in general but particularly so regarding impaired vision, E.N.T, dental, expectant mothers and pediatric services. These facilities offer primary treatment only and must often refer patients to healthcare facilities in other parts of the country.

Population and Public Health in Nga, Beng and Houn districts:

District	Population	No. Hospital	No. Health Centers
Nga	28,898	1	3
Beng	36,026	1	6
Houn	67,949	1	9
TOTAL	132,873	3	18

Human resources at Nga, Beng and Houn district hospitals:

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District	Staff	Specialist	M.D	Dentist	ENT	Eye	Pediatric
					doctor	doctor	doctor
Nga	32	0	1	0	0	0	0
Beng	43	0	2	1	0	0	0
Houn	58	0	3	1	0	0	0
TOTAL	133	0	6	2	0	0	0

#### II. STATEMENT OF MISSION

Beginning in 2008 and in cooperation with Oudomxay Hospital, the Lao Rehabilitation Foundation has conducted several missions in the remote areas of the four Northern provinces of Laos. These included Phongsaly, Luang Namtha, Oudomxay and Bokeo provinces. In February of 2010, a successful plastic surgery mission took place in Bokeo province. These missions offered dental, E.N.T and eye care, as well as obstetric and pediatric services. The outcome of the missions was highly successful, treating over 18,000 patients who otherwise could not have afforded healthcare.

Many of the diseases encountered in remote area are treatable and preventable. Otitis media is the main cause of deafness, and cavitas dentis the main cause of dental disease. Cataract is the main cause of blindness, pulmonary infection the main cause of infectious disease in children and the main cause of infant mortality is breech and transverse presentations in pregnancy. Addressing these healthcare issues in a timely manner directly contributes to the prevention of diseases in general and to the fast recovery of patients.

The number of incidents of blindness, deafness, cavitas dentinitis and pediatric infectious diseases is extremely high in these remote areas and would continue to increase without the intervention of a mobile healthcare service team.

This healthcare mission was also 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 National Science Council Lao Government's Office, Oudomxay, Setthathilat and Mittaphab Hospitals, the Lao Rehabilitation Foundation (LRF) and the Fred Hollows Foundation (FHF).

#### III. OBJECTIVE

#### 1. General Objective:

- Decrease the prevalence of hyperthyroid (goiter), cleft lip/palate, blindness, deafness, cavitas dentis and the maternal-infant mortality rate.
- Broaden the coverage of health services for people in remote areas, ethnic minority groups and the urban poor.

#### 2. Specific Objective:

- Improve the life of patients by surgical repair of hyperthyroid, cleft lip/cleft palate, burn and traumatic scar.
- Treat the main cause of blindness with cataract surgery and provide refractive service to the visually impaired.
- Provide treatment and prevention of the main cause of deaf, otitis media.
- Provide treatment and prevention of cavitas dentis by calciferous cleaning.
- Examine pregnant women by echography.
- Treat and prevent infectious disease in children.

- Provide healthcare education for eye, dental and ENT as well as healthcare education for expectant mothers.
- Provide human resource development for Lao doctors and staff and an appropriation of medical equipment to district hospitals.

#### **IV. TARGET**

- Service all patients free of charge, with no regard to gender, age, ethnicity or religion for ENT, dental, eye, expectant mother and pediatric health care.
- Provide service to a total target of 4,233 patients for 3 districts.
- Provide surgery to a total target of 143 cases, including:
  - o ENT and burn scar surgery: 23 cases
  - o Cataract surgery: 80 cases
  - o Peterygium, eyelid surgery: 40 cases.

#### V. LOCATION AND DURATION

- 6 days (February 1-6, 2012) at Oudomxay provincial hospital, performing hyperthyroid/goiter, cleft lip/palate and burn scar surgeries.
- 8 days (February 1-8, 2012) in the three districts of Nga, Beng, and Houn in Oudomxay province, providing ENT, dental, eye, expectant mother and pediatric care.

Date	Location
February 1-3, 2012	Nga district (district hospital)
February 4-5, 2012	Beng district (district hospital)
February 6-8, 2012	Houn district (district hospital)

#### VI. <u>TEAMWORK</u>

The teamwork of 30 people included:

#### 1. Lao Team (25) From Oudomxay Hospital (11):

_	Ophthalmologist	01
	(Head of Lao Team)	
_	Dentist	01
_	Pediatrician	01
_	Gynecologist (OB)	01
_	Ophthalmic nurses	03
_	Nurse assistants	04



#### From Luang Prabang Provincial Hospital (1):

Ophthalmologist01

#### From Bokeo Provincial Hospital (1):

Dentist01

#### From Setthathirat Hospital, Vientiane Capital (2):

Hyperthyroid surgeon 01Anesthesiologist 01

#### From Mittaphab Hospital, Vientiane Capital (1):

ENT doctor01

#### Local Staff (9):

Nurse assistants 07Staff assistants 02

#### 2. US Team (5)

_	President of LRF	01 (Head of US Team)
_	ENT surgeon	01
_	Plastic surgeon	01
_	OR/recovery nurse	01
_	Lao coordinator	01

(Detail on attaches files)

#### VII. INSTRUMENTS AND MEDICINE

This mission was performed with the use of quality manual and automated equipment intended for mobile healthcare and effective medicine for treatment. It included:

- 1. Instruments and medicine for ENT, plastic surgery.
- 2. Instruments and medicine for ENT services.
- 3. Instruments and medicine for dental services.
- 4. Instruments and medicine for eye services.
- 5. Instruments and medicine for expectant mother services.
- 6. Instruments and medicine for pediatric services.



#### **VIII. OVERSIGHT UNITS**

### 1. <u>Oudomxay Provincial Public Health Department and Nga, Beng and Houn Districts Public Health</u>

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

#### 2. Lao Government 's Office, National Science Council

- Informed Oudomxay provincial governor office and public health department of the mission.
- Informed MoFA and provided courtesy visas to US team members.

#### 3. Lao Rehabilitation Foundation

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

#### 4. Fred Hollows Foundation

- Provided medical instruments and medicine for eye care.
- Provided per diem, transportation and accommodation for the eye care team.

#### PART II METHODOLOGY

#### I. PREPARATION

- Cooperation in partnership with the provincial and district hospitals.
- Written proposal to inform local authorities of the purpose, planned activities to get agreement from GO NSC, MoH and MoFA.
- Appointment of patients by advertising and by informing them from district hospitals to villages.
- Preparation of equipment, supplies, medicine, budget and team recruitment.

#### II. ACTIVITIES PERFORMED

#### Participants divided into 2 teams:

**Team 1:** performed surgery at Oudomxay provincial hospital:

ENT and plastic surgeons from USA and Setthathirat hospital joined the Oudomxay provincial hospital team to do:

- Hyperthyroid/goiter surgery
- Cleft lip/palate surgery
- Burn scar and contracture release surgery



Nodule-goiter examined by: **Dr. BounYor Monmalychan**, Surgeon (Setthathilat ) **Dr. Kyle Keojampa, ENT surgeon** (USA)



Nodule-goiter examined with ultrasound machine by: **Dr. BounYor Monmalychan**, Surgeon (Setthathilat ) **Dr. Kyle Keojampa, ENT surgeon** (USA)



USA and Lao surgeons in operating room



**Dr. Kyle Keojampa** is teaching Lao surgeon how to use video Laryngoscope



**Dr. K. Keojampa** (USA) and Lao surgeon operating goiter

**Team 2:** provided mobile health care services in 3 districts hospitals (Nga, Beng and Houn). 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.

5 main services were provided:

#### 1. Examination and treatment of E.N.T disease:

The ENT team (1 ENT expert from Mittaphap Hospital Vientiane and 1 ENT nurse) performed the following activities:

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



Dr. K. Sypraseuth and local staff examined patients after training



E.N.T patients are examined and treated by Dr. Khamsing Sypraseuth ENT expert, Mittaphab Hospital, Vientiane

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

The dental team (2 dentists, 1 from Oudomxay and 1 from Bokeo provinces and 3 dental nurses) performed the following activities:

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





Tooth extraction and calciferous cleaning by Dr. S. Vongprachit and Dr. S. Thongsavath, dentists from Oudomxay and Bokeo

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

The eye team (2 ophthalmologist and 4 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 IOL implant.
- Health education of primary eye care and post-operative procedures.



Cataract surgery by Dr. Phetsamone and Dr. Houmphan using SICS technique.



Cataract post-surgery 1<sup>st</sup> day at Houn district hospital.

#### 4. Examination of expectant mothers:

Obstetric Team (1 gynecologist and 1 OB nurse) performed the following activities:

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



Expectant mother examined with ultrasound machine by Dr. Vanpheng Chanthamit Gynecologist, Oudomxay Hospital

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

Pediatric team (1 pediatrician and 1 assisting nurse) performed the following activities:

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





Child tested for weigh and high by nurse assistant



Child examined and treated by Dr. Soukmany Chanthavisouk, pediatrician.

#### 6. <u>Dental screening of children at primary schools</u>

A team of USA with local assistant nurses performed the following activities

at two primary schools (Hmong and Kmou ethnic schools):

- Dental examination
- Dental care education
- Donation of toothbrushes and toothpaste
- Fluoride varnish application
- Donation of educational materials



Teacher and students, at primary school



Application of fluoride vanish at primary school (Houn district) by Dr. Luc Janssens, President of LRF



Student examined at primary school (Houn district) by LRF team

#### 7. Other Activities Performed

Medical equipment and medicine was donated for ENT, dental, expectant mother and pediatric needs to Nga, Beng and Houn district hospitals. Intubation set and anesthesia medicine was donated to LuanNamtha provincial hospital. Intubation set and ultrasound machine were donated to Phongsaly provincial hospital. (List of donated equipment on attach file).



Dr. Luc Janssens donated toothbrushes, toothpaste and educational materials to children at primary school. Received by director of primary school in Houn district.



Dr. Luc Janssens donated medical equipment and medicine to Nga district hospital. Received by Dr. Phoutseng, Director of Nga District Hospital.



Dr. Luc Janssens donated medical equipment and medicine to Beng district hospital. Received by Aloune, Director of Beng District PoH.



Dr. Luc Janssens donated medical equipment and medicine to Houn district hospital. Received by Dr. Somphan, Director of Houn District Hospital.



LRF coordinator, Phetsamone Indara, M.D. donated medical equipment to Phongsaly provincial hospital. Received by Dr. Bouasavanh, Director of Phongsaly provincial Hospital.



Dr. Luc Janssens donated medical equipment and medicine to LuangNamtha provincial hospital. Received by Dr. Somsay, Anesthesiologist, LuangNamtha provincial hospital

# PART III RESULTS

A total of 3,643 cases (female: 1,477 or 40.5%) were treated free of charge for all patients with no regard to gender, age, ethnicity or religion. Services included:

### I. <u>Hyperthyroid/goiter, cleft lip/palate and burn scar surgeries at Oudomxay provincial hospital:</u>

A total of 64 cases were examined, and surgery performed for 30 cases. The surgeries included:

No.	Surgery	Qty.
1	Hyperthyroid or goiter	8
2	Cleft lip / palate	3
3	Burn scar revision / contracture	19
	Total	30

### II. <u>Mobile health care for ENT, dental, eye, expectant mother and pediatric services</u> in the remote areas of Nga, Beng and Houn districts.

A total of 3,579 cases were examined and treated. It included:

		Number of patients examined and treated			
No	Treatment	Nga	Beng	Houn	Total
		district	district	district	
1	E.N.T	205	145	334	684
2	Dental	358	233	371	962
3	Eye	235	175	322	732
4	Pregnancy	41	25	54	120
5	Infant and Child	205	139	337	681
6	Children at Primary School	0	0	400	400
	Grand total	1,044	717	1,818	3,579

#### 1. ENT Results:

684 patients were examined and treated in the three districts of Nga, Beng and Houn. ENT cases included:

_	Otitis media perforation:	187
_	Otitis media effusion:	118
_	Tonsillitis/ Pharyngitis:	72
_	Rhinitis:	69
_	Neuro sensorial hearing loss:	56
_	Otitis external:	44
_	Ear wax occlusion	41
_	Otitis media acute:	23
_	Goiter:	19
_	Sinusitis:	13
_	Other:	42

#### 2. Dental Results

962 patients were examined and treated in the three districts of Nga, Beng and Houn. Dental cases included:

Cavitis dentis with extraction: 402
Cavitas dentitis non extract. 108
Cleaning Calciferous: 72
Dentitis simple: 142
Repair teeth: 177
Other: 61

#### 3. Eye Results

732 patients were examined and treated in the three districts of Nga, Beng and Houn. Vision tests with diagnostic examinations were also provided. Surgery was provided for 180 patients. Eye cases included:

Cataract surgeryPterygium excision, eyelid correction:43

47 refractive services were performed and 31 pairs of glasses were distributed for refractive error (myopia and hyperopia).

#### 4. Obstetric Results:

120 pregnant patients were examined in the 3 districts of Nga, Beng and Houn. 6 cases were declared problematic:

_	Hydrops fetalis	01
_	Breech presentation	03
_	Mort in utero	01
_	Twin	01

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

#### 5. Pediatric Results:

681 children or infants were examined and treated in the 3 districts of Nga, Beng and Houn. The main diseases were:

_	Cold fever:	153
_	Pharyngitis:	151
_	Diarrhea:	88
_	Parasitose:	85
_	Pneumonia:	53
_	Tonsilitis:	35
_	Skin infection:	33
_	Anemia or Thalasemia	31
_	Stomatitis	12
_	Other	40

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

400 children were screened at two primary schools in Houn district (1 Hmong school and 1 Khmou school). Findings are as follows:

- Children had a high prevalence of severe dental caries.
- All children received fluoride varnish application.

# PART IV BUDGET AND EXPENDITURE

The total projected budget of **58,414.00 USD** (fifty eight thousand four hundred and fourteen USD) was to be provided mainly by Lao Rehabilitation Foundation with some support from Fred Hollows Foundation for eye care.

The total actual expenditure increased greatly to *64,231.00 USD* (Sixty four thousand two hundred and thirty one USD) as additional medical equipment was provided to 3 district hospitals and 2 provincial hospitals. The actual budget included:

_	Medical equipment	\$19,096.00
_	Transportation of equipment from USA	\$1,500.00
_	Medicine (drugs) from USA	\$8,812.00
_	Medicine (drugs) from Laos	\$6,633.00
_	Medicine and supplies for ENT surgery and burn scar	\$2,242.00
_	Transportation and accommodation of USA team	\$11,080.00
_	Transportation, food and accommodation of Lao team	\$4,030.00
_	Preparation of the mission	\$525.00
_	Rental of vehicles and fuel	\$1,885.00
_	Toothpaste, toothbrushes and educational materials	\$685
_	Medicine and supplies for eye service	\$7,743.00

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

# PART V DISCUSSION

Mobile health care is necessary in order to provide care to poor people that cannot afford the cost of traveling to provincial hospitals, and important because of the shortage of experts and the limitation of medical equipment at district level.

Ear infection with perforation of tympanic membrane, is one of the main cause of deafness. 45% of the ENT cases we found during this mission and 55% of the ENT cases we found during our previous mission in Bokeo province were such severe ear infections. Limited education and lack of primary ear care in children and teenagers are probably the main factors contributing to hearing loss.

Severe dental cavities is a widespread problem in remote areas and extraction is often the only remedy available. Limited education and lack of primary dental care in children and teenagers are the primary causes. Education and preventive measures should be undertaken to reduce the prevalence of dental diseases in remote regions.

The main cause of blindness is cataract. Even though vision can be improved or restored by cataract surgery with intra-ocular lens, avoiding post-surgery complications is always a challenge in remote area. 98% of our patients are poor, over 50 years old, living far away with no one to accompany them for follow-up visits at the eye unit of the provincial hospital.

The healthcare of expectant mothers and children is a priority for the ministry of health and for the provincial public health departments in Laos. However with limited access to health care, it is difficult for mothers to diagnose diseases and follow through with the proper treatment. Specialists and diagnostic equipment are also severely limited in Nga and Beng district hospitals. As part of this mission, LRF provided these two district hospitals with basic medical equipment for gynecology and obstetrics. We hope it will help to reduce maternal and child mortality in the province.

Cold fever and pharyngitis are the most common pediatric diseases we found during this mission (44.6% of all cases). Without proper treatment, cold fever and pharyngitis can evolve to severe pneumonia which is often fatal. Most children are from poor families, often malnourished and in great need of supplemental vitamins.

Most of the children we have seen at two primary school (Hmong and Khmou), have severe dental cavities we believe caused by lack of oral hygiene. The Departments of Public Health and Education should develop a preventive program to reduce this incidence.

A total number of 2,653 cases were examined and treated during this mission, representing 87% of our original target. The number of surgeries performed was slightly higher than targeted. Many patients have not yet received treatment in remote areas.

# PART VI CONCLUSION AND RECOMMENDATIONS

This is our 9<sup>th</sup> mobile health care mission in remote areas of the 4 Northern provinces of Laos and the 5<sup>th</sup> in Oudomxay province. This mission was held at 3 district hospitals and at the provincial hospital for 8 days during February 1-8, 2012, serving 3,653 patients. Together, the team of Lao and US healthcare professionals used modern equipment and techniques to examine and treat patients for ENT, dental, eye, obstetric and pediatric complaints and provided services free of charge with no regard to gender, age, ethnicity or religion. All activities were performed as planned with successful outcome.

#### **Accomplishments:**

- We treated poor patients who otherwise would not have access to healthcare in remote areas.
- We improved living conditions for hyperthyroid/goiter, cleft lip/palate and burn scar patients.
- We contributed to the prevention of ear and dental diseases; we restored or improved visual ability and helped decreasing infant and maternal mortality in Oudomxay province.
- We improved healthcare for expectant mothers in all phases of pregnancy in remote areas.
- We provided education and hands-on experience to Lao doctors for ENT surgery by introducing them to new techniques taught by US experts.
- We educated the local staff on examination and treatment techniques for ENT, dental, pediatric and obstetric health issues.
- We provided an assessment of needs for the dental health care of children at primary schools in Houn district of Oudomxay province.
- We provided essential medical instruments and medicine to 3 district hospitals in Oudomxay province and to LuangNamtha and Phonsaly provincial hospitals.

#### Weaknesses:

- Splitting the team between 2 locations (in remote area and at provincial hospital) was difficult to manage for the coordinators.
- Unfortunately, the provincial hospital blood testing technician was attending a meeting in Thailand for 10 days during the mission. Hyperthyroid patients had to be referred to an outside private clinic for their T3, T4 and TSH blood tests.
- We did not have sufficient time to cover the needs of all patients.
- Information of the team's arrival in Beng district did not reach all villages in time as planned, resulting in fewer patients showing up at the clinic.
- We had an accidental difficulty with a dental case in Nga. The patient was transferred to the provincial hospital, treated by US surgeons and recovered well.

In conclusion, the delivery of healthcare in remote area by mobile medical teams is of the outmost importance for the education of local healthcare providers, the prevention of diseases and treatment of villagers in the Northern provinces of Lao PDR.

# PART VII NEXT MISSION PLANNING

(under consideration)

#### **ACTIVITIES:**

- Treat cataract, the leading cause of blindness by IOL surgery in addition to peterygium and eyelid surgeries and treat the leading cause of visual impairment by refractive service.
- Provide treatment and prevention of otitis media, the main cause of deafness.
- Provide treatment of dental cavities by fillings and prevention by calciferous cleaning and fluorite varnish application in schools.
- Provide examination of pregnant women by echography.
- Provide prevention and treatment of infectious disease in children.
- Provide professional development opportunities for Lao doctors and staff and medical instrument to district hospitals.
- Screen primary schools children for general health, and particularly for eye, dental and ENT care.

#### LOCATION:

 In 3 areas of Luang Namtha Province, Long, Sing and Viengphoukha Districts.

#### **DURATION:**

October 2012





Phetsamone Indara, MD. LRF Coordinator, head of ODX Eye Unit Phone: +856-20-22203708 Email: inda\_oph@yahoo.com

President of Lao Rehabilitation Foundation (LRF)



Dr. Luc Janssens

## Director of Oudomxay Provincial Public Health Department



# PART VIII ATTACHMENT DOCUMENTS

#### **TEAM WORK**

#### Lao Rehabilitation Foundation



Dr. Luc Janssens President of LRF, USA



Sasithone Sengchanh Coordinator in Vientiane

#### **TEAM WORK**

#### **USA and Lao Teams (Team 1)**



Bounmany Kyle KeoJampa, MD. ENT surgeon, USA



Carlos Mata, MD. Plastic surgeon, USA



Jamie Lynn Eller OR/recovery nurse, USA



Bounyor Monmalychanh, MD. Hyperthyroid surgeon, Vientiane



Keo Phommarath, MD. Anesthesiologist, Vientiane



Phonsamout Chalernphon Anesthesiologist, Oudomxay



Soulisith Homphothichak , MD. Abdominal surgeon, Oudomxay



Ounkham Mongdangkai ENT doctor



Malikhith Chanthavong Anesthesia assistant nurse

#### **TEAM WORK**

#### Lao Team (Team 2)



Phetsamone Indara, MD. Ophthalmologist Coordinator in Oudomxay



Khamsing Sipraseuth, MD. ENT expert From Mittaphab hospital, VT



Ophthalmologist From LuangPrabang



Houmphan Chansavath, MD. Soukmany Chanthavisouk, MD. Pediatrician



Sulimaly Vongpachit, DDS. Dentist



Sonnaly Thongsavath DDS. Dentist From Bokeo



Vanpheng Chanthamit, MD. Gynaecologist (OB)



Davone Ophthalmic nurse



Phonthavy Inthavongsa Ophthalmic nurse



Sonmany Lassavong Dental assistant nurse



SoukanYa Khamdy Pediatric assistant nurse



Souliyo Setsongkham Ophthalmic nurse



Phetmany ThammapanYa ENT assistant nurse



Viengthong Chansavanh Dental assistant nurse

#### OFFICIAL ACKNOWLEDGEMENT OF RECEIPTS











