

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

**REPORT OF
EAR-NOSE & THROAT and PLASTIC
SURGERY**

At

**Oudomxay Provincial Hospital
LAO, PDR**

June 11-18, 2013



A Cooperation Between

**Oudomxay Provincial Hospital,
Setthathirat Hospital, Vientiane
and**

Lao Rehabilitation Foundation (LRF)

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ABSTRACT

Title: ENT and Plastic Surgery at Oudomxay Provincial Hospital, Lao PDR.

Aim: To decrease the prevalence of ear, nose & throat diseases in Oudomxay and to enhance the surgical skills of Lao medical personnel.

Methodology: It took 4 months (February 2013 to May 2013) to prepare the mission, to register patients (cleft lip/palate, hyperthyroid and burn scars). For hyperthyroid cases, blood test T3, T4 and TSH were done prior to the arrival of the team. Patients were examined before surgery by experts with modern equipment. Surgery was performed when deemed necessary and in order of priority. Post surgery follow up was provided. The medical team included 4 surgeons, 4 anesthesiologists, 4 OR nurses and 3 recovery nurses.

Result: 126 patients were examined, treated with medicine and advised. 14 cases were selected for surgery.

Outcome: All operations were successful and there were no complications.

I. Background Information

1. Oudomxay Provincial Hospital

Oudomxay province is the centrally located province of the 4 Northern provinces of Laos. It borders Phongsaly, Luang Namtha, Bokeo, Xayabury and Luang Prabang provinces. High mountains cover 85% of the land. The population according to the latest census (2010) is 285,874 and many poor people live in remote areas. The economy is mainly agricultural and farming.

The public health care system includes 1 provincial hospital, 1 military hospital, 6 district hospitals and 44 primary health care centers.

Laos and Oudomxay provinces map



Oudomxay Provincial Hospital is the primary government hospital of the Northern provinces. There is a plan to establish the Oudomxay Provincial Hospital as a Regional Hospital to expand service coverage to the neighboring provinces of Luang Namtha, Bokeo and Phonsaly . There are 92 beds with 135 staffs (88 F). The hospital is staffed by:

- Specialist (postgraduate)	16 (3 anesthesiologists, 2 ENT doctors)
- Medical doctor (graduate)	29
- Third level medicine (4 year training)	03
- Secondary level medicine (3 year training)	48
- Primary level medicine (1 year training)	39

The provincial hospital has an ENT department within the main hospital building. ENT surgery is undertaken in a shared operating theatre of the hospital and post-operative patients stay in the general medical ward. Human resources for ENT care are 2 doctors, (one trained in Vietnam for 3 years).

ENT service is an important and necessary health care component of the provincial hospital; however it has limited functioning due to lack of specialist's skills and surgical equipment. Often, patients must be referred to Mahosot hospital in Vientiane Capital which most patients cannot afford.

For several years, the ENT team of ODX province, in cooperation with Lao Rehabilitation Foundation (LRF), has provided mobile health care in remote areas and ENT surgery at Oudomay provincial hospital. However many patients are still waiting for treatment.

This mission is the third ENT surgical mission at Oudomxay Provincial Hospital funded by Lao Rehabilitation Foundation, USA.

II. OBJECTIVE

1. General objective

1. To decrease the prevalence of ear, nose & throat disease.
2. To cooperate with US expert doctors for developing surgical skills of Lao medical personnel.

2. Specific objective

1. Improve the life of patients by surgical repair of cleft lip/cleft palate, thyroidectomy and other plastic surgeries.
2. Teaching new technical and surgical skills to Oudomxay and Setthathirat surgeons for thyroidectomy, cleft lip/palate and burn scars surgery.

III. LOCATION AND DURATION

This mission provided services at Oudomxay provincial hospital for 8 days from June 11-18, 2013.

IV. TEAM WORK

There were **19** team members:

- **Oudomxay Provincial Hospital (13):**
 - Coordinator 01
 - Thyroid specialist 01
 - Surgeons 02
 - Anesthesiologists 02
 - Nurse assistant in OR 04
 - Nurse assistant in OPD 03
- **Setthathirat Hospital (Vientiane) (3):**
 - Thyroid surgeon 01
 - Anesthesiologists 02
- **USA Team (3):**
 - President of LRF 01
 - ENT surgeon 01
 - Coordinator 01



(Detail on attaches files)

V. INSTRUMENTS AND MEDICINE

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

1. Instruments and medicine for ENT examination
2. Instruments and medicine for ENT surgery
3. Instruments and medicine for anesthesia
4. Instruments and medicine for recovery and post surgery

(Detail on attaches files)

VI. RESPONSIBLE UNIT

1. Oudomxay Provincial Hospital

- Secured official agreements and approvals (LRF, MoH, MoFA).
- Provided leadership to register patients and make appointments.
- Provided location to examine and operate patients.
- Invited Vientiane team.

2. Lao Rehabilitation Foundation

- Provided funding for medical equipment and medicine needed for the mission.
- Provided funding for blood testing thyroid cases prior to the mission.
- Provided funding for per diem, transportation and accommodations for the Lao team.

VII. TECHNICAL ACTIVITY

1. Preparing

- 4 months to prepare (February 2013 to May 2013). LRF coordinators in Vientiane and Oudomxay Hospital to advertise the purpose of the mission, plan activities and get agreements and approvals from Oudomxay Provincial hospital, Provincial Public Health, Governor, Administrative Office of Ministries of Health and Foreign Affairs.
- Register patients and schedule appointments.
- Prepare equipment, supplies, medicine, budget and teamwork in Laos and USA.

2. Activities performed

- Provided service to all registered patients. The team used manual and automated equipment to examine and treat patients.
- The US team and Setthathirat Hospital team, joined Oudomxay surgeons and anesthesiologists to:
 - Check and prepare pre-surgery cases.
 - Operate hyperthyroid or goiter and cyst.
 - Taught new surgical techniques for thyroidectomy to Setthathirat and Oudomxay Hospital surgeons.

2.1 Other activities

- LRF donated operating room clothing and medical equipment to Oudomxay Provincial Hospital.
- LRF Donated sterile silk sutures (2/0, 3/0, 4/0) to Beng, Houn and Pakbeng district hospitals, and Mokhokang health center.
- LRF provided funds for the emergency appendicitis surgery of a Hmong child at Oudomxay Provincial Hospital.

VIII. RESULTS

All registered patients were examined during the mission, with no regard to gender, age, ethnicity and religion free of charge for a total of 126 patients (122 females), 14 surgeries were performed as follows:

Examined:

No.	Disease	Qty.
1	Tonsillitis	2
2	Hyperthyroid	102
3	Nodule-goiter	15
4	Cyst/tumor	3
5	ENT diseases other	4
	Total	126

Surgeries performed:

No.	Treatment (Surgery)	Target	Treated (operated)
1	Thyroidectomy	25	13
2	Cyst/Tumor	0	1
3	Tonsillectomy	2	0
4	Cleft lip/palate	3	0
5	Scar / Burn	15	0
	Total	45	14

IX. BUDGET AND EXPENDITURE

The projected budget was **27,040.00 USD** (twenty seven thousand and forty USD).

The total actual expenditure increased to **53,231.00 USD** (fifty three thousand two hundred and thirty one USD) as unbudgeted anesthesia machine and patient monitors were needed and medical equipment was requested by 3 district hospitals and 1 health center in the province.

The actual expenditure is as follows:

– Instruments and equipment from USA	\$24,320
– Medicine from USA	\$17,080
– Transport medical equipment and medicine	\$1,000
– Medicine from Oudomxay hospital	\$2,784
– Transport and accommodation of USA team	\$5,330
– Transport and accommodation of Lao team	\$2,564
– Preparation and fuel	\$153
– Operating room scrubs and gowns	\$500

(Detail on attach files)

X. DISCUSSION

As evidenced by the high number of thyroid cases registered for this mission, there is a high prevalence of goiter and hyperthyroid cases in Oudomxay. Expectedly, this trend will continue without a plan to treat and prevent.

The primarily concerned of many patients was cosmetic. Patients were advised of the possible complications of thyroid surgery such as: postoperative bleeding, injury to the recurrent laryngeal nerve, hypoparathyroidism, hypothyroidism, thyrotoxic storm, injury to the superior laryngeal nerve and infection.

Only few cleft lip/palate patients were registered as Smile Train Project is now serving the Northern provinces of Laos.

Only few burn scars cases were registered as they learned that the US plastic surgeon could not join this mission.

The number of surgeries performed is below target, because of the above mentioned problems.

XI. CONCLUSION

This mission was the third ENT surgical mission organized by Lao Rehabilitation Foundation at Oudomxay provincial hospital. In cooperation with the Lao medical team, it accomplished 14 successful surgeries without complications, and provided an opportunity for Lao medical personnel to learn new techniques for thyroid examination, diagnosis and treatment while recording valuable data of hyperthyroid and nodule-goiter cases for the planning of future missions.

XII. FUTURE PLAN

LRF will consider organizing a fourth ENT surgical mission at Oudomxay Provincial Hospital in February 2014.

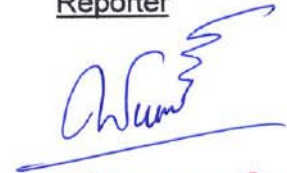
Director of Oudomxay Provincial Hospital

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ດຣ. ສຸວັນທອງ ແສນວັນນະຄຳ
Dr. Souvanthong SENVANNAKHAM

Reporter



ດຣ. ເພັດສະໝອນ ອິນດາລາ
Phetsamone INDARA, MD.

Director of Oudomxay Provincial Public Health

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ດຣ. ສຸນທອນ ຫຼວງໄຊສີ
Dr. Sounethone LOUANGXAYSV

ATTACHMENTS

1. Photo of Activities
2. Teamwork
3. List of Information and Approval Letters

TREATMENT OF THYROID DISORDERS AND THYROID SURGERY

Oudomxay Provincial Hospital, LAO PDR

June 2013

The Lao Rehabilitation Foundation funded and organized the surgical mission from June 11-19th, 2013. Winchester Hospital donated medical supplies. Ethicon donated medical sutures. A glidescope videolaryngoscope by Verathon Medical was on loan for use on this mission. Luc Janssens PhD, president of the Lao Rehabilitation Foundation organized the mission in conjunction with Dr. Phetsamone Indara, Lao Ophthalmologist at Oudomxay Eye Unit. This was an ongoing yearly surgical mission in Oudomxay Hospital.

The primary focus of this mission was to collaborate with the Lao physicians and surgeons to provide experience with thyroid disorders and thyroid surgery. This mission required continued yearlong collaboration with the Lao doctors to treat patients with thyroid conditions and prepare appropriate patients for surgery.

All thyroid disorder patients received a comprehensive history and physical examination, including measurement of pulse rate, blood pressure, and respiratory rate. In addition, thyroid size; presence or absence of thyroid tenderness, symmetry, and nodularity; and presence or absence of eye signs were assessed. Additionally, they were evaluated with thyroid function tests (Thyroid Stimulating Hormone, T3, and T4 levels) to accurately diagnose their condition. The majority of patients were hyperthyroid with toxic multinodular goiters. With coordination with our Lao physicians, these patients were treated with antithyroid medication (methimazole/carbimazole) to return them back to normal thyroid function. Additionally, symptomatic patients were treated with beta-blockers to decrease heart rate, systolic blood pressure, muscle weakness, and tremor.

Patients with high likelihood of successful medical treatment (mild disease, small goiters, and the elderly) were treated primarily with antithyroid medications.

For patients who met criteria (symptomatic compression, large goiters, suspicious nodules on ultrasound, or high likelihood of inadequate treatment with antithyroid medications) were offered subtotal thyroidectomy for definitive treatment. Other modalities such as radioactive iodine treatment were not available because of the prohibitive cost and lack of availability in the country. We preferred subtotal thyroidectomy versus total thyroidectomy to minimize the need to take thyroid hormone replacement after surgery, allowing residual normal thyroid function in the majority of patients. For patients undergoing surgery, all

patients were pretreated with antithyroid medications and were euthyroid (normal thyroid function) at the time of surgery. A preoperative thyroid ultrasound was performed to determine general thyroid pathology, thyroid size, any tracheal deviation or compression from the goiter. A fiberoptic laryngoscope was available to assess for vocal fold mobility/airway obstruction and a glidescope videolaryngoscope was used in the operating room to ensure successful airway management of large goiters. We had the ability to monitor patients postoperatively to assess for possible hypocalcemia after surgery.

We trained Lao surgeons, anesthesiologists and nurses. All operations were successful and there were no complications. In the past, many of these complex operations were sent to the capital Vientiane or Thailand, which did not provide the local Lao surgeons with the opportunity to develop surgical skills in this area.

We worked to collaborate with the Lao medical and surgical team. Dr. Keo Phommarat – Lao Anesthesiologist and Dr. Bounour, Lao Thyroid surgeon from Setthathirath Hospital from the capital Vientiane joined us again this year. It is definitely important to involve as many Lao doctors on these missions as the eventual goal it to make these projects self-sustainable using resources of the host country.

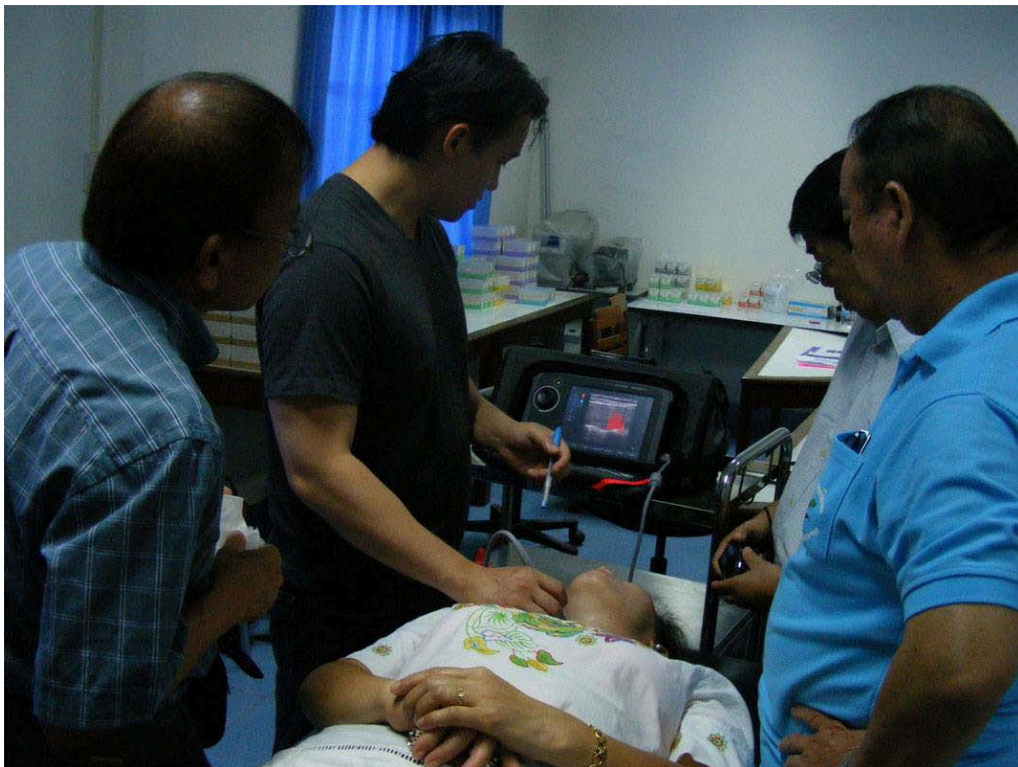
We strived to develop self-sufficiency, and self-sustainability. All our surgical cases had Lao surgeons operating and collaborating with us. Our goal is to have the Lao surgeons gain experience and become proficient at performing those procedures independently. We worked with the established Lao team of doctors, nurses, and staff. We brought surgical equipment and donated them for continued use after our mission.

Our goals were met as we successfully treated 126 patients afflicted with thyroid disorders such as Toxic Nodular Goiters, Grave's Disease, and Hyperthyroidism and provided thyroid surgery for 14 patients without any complications during our mission from June 11-19th at Oudomxay Provincial Hospital.

We organized postoperative follow up with our Lao physicians. Our team stayed two days extra after operations were completed to address any possible issues. We are planning yearly medical missions to Laos, working on expanding on the previous year's work and involving more Lao doctors. There were a large number of patients needing surgery which we could not accommodate all of them on this mission. We are hoping to recruit additional US experts in Endocrinology, Anesthesiology, and Surgery to expand our goal of providing advanced medical services to Laotian people with a greater focus on children and the poor.



Large thyroid goiter which was causing dysphagia, airway compression. She underwent successful thyroidectomy



Demonstrating Thyroid ultrasound to examine for thyroid pathology, general thyroid size, and any tracheal deviation from goiter



Thyroid patients waiting to be examined. We found a large number of patients with toxic multinodular goiters. Iodine deficient goiters from hypothyroidism were rarely seen.



Operating with Lao surgeons, demonstrating step by step the surgical techniques to perform safe thyroidectomy. Our goal was teach the local surgeons to perform these surgeries and become self-sufficient to make our surgical missions sustainable



Examining a Thyroid Goiter Patient