

**Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity**

Oudomxay Provincial Health Department
Oudomxay Provincial Hospital
Lao Rehabilitation Foundation

No. **359** /PH.ODX

Oudomxay, Date. **25 FEB 2020**

**REPORT
OF CATARACT SURGERY MISSION,
REFRACTION TRAINING AND VISION
SCREENINGS IN SCHOOLS**

in Oudomxay Province, Lao PDR.



**Eye Care Unit of Oudomxay Provincial Hospital
in Partnership with
Lao Rehabilitation Foundation, Inc.
and SEE International**

- Refer to the Operation Permit of LRF to provide mobile health care in Oudomxay in 2019-2020
- Refer to the LRF 2020 Action Plans

This mission was a partnership between the Eye Care Unit of Oudomxay Provincial Hospital and Lao Rehabilitation Foundation (LRF) in association with SEE International to provide health care for cataract surgery, short optometry training and screening vision for student at school for 10 days, January 27 to February 08, 2020, details as follows:

I. OBJECTIVE

- To reduce avoidable blindness in Lao PDR
- To improve cataract surgical outcomes
- To improve refraction service for Houn district
- To evaluate and implement a school based child vision screening program

II. LOCATION AND DURATION

For surgery and refraction training:

- At Eye Care Unit, Oudomxay Provincial Hospital: Jan 27, 2020 – Feb 05, 2020

For screening vision of students at secondary school:

- At Ethnic School: Feb 06, 2020
- At Navang School, Houn district: Feb 07, 2020

III. TEAMWORK AND TRAINEE

1. Dr. Luc Janssens	President of LRF
2. Phetsamone Indara, MD	Ophthalmologist
3. SengLa Laosern, MD	Ophthalmologist
4. Phonethavy Inthavongsa	Ophthalmic nurse
5. Mr. Khamtan PhanthouAmat	Optometrist
6. Ms. Sipa	Ophthalmic nurse
7. Ms. Suliyo	Ophthalmic nurse
8. Ms. Sommee	Ophthalmic nurse
9. Ms. Khamman Yabee	Ophthalmic nurse (trainee)

VI. INSTRUMENTS AND MEDICINE

This mission was performed using quality modern equipment intended for cataract surgery, refraction exams and training and effective medicines for treatment. Equipment and supplies were provided by LRF in cooperation with SEE International (Surgical Eye Expeditions of USA). It included:

1. Phacoemulsification machine (Amo Sovereign Compact)
2. Surgical instruments, equipment and supplies
3. Medical supplies for cataract surgery
4. Medicine for eye care service
5. Portable auto-refractor (QuickSee)
6. Phoropter

VII. ACTIVITIES PERFORMED

1. Finding Cataract Cases

The local ophthalmic nurses went to screen the vision of older people in remote villages to find patients with cataracts and appointed them at a date and location to be treated.

2. Cataract Surgeries

Surgeries were performed by phacoemulsification. Hard cataract cases were performed by manual small incision (MSICS) techniques.

3. Outcome and Monitoring

There were 2 phases: Phase 1 recorded on the day of discharge and Phase 2 recorded on post operated 4-6 weeks later (previous patients).

1. Phase I: Assessed 1-3 days after surgery:

- Date of surgery
- Patient name, age and gender
- ICD Code
- Eye operated
- Pre-operative best corrected VA
- Post-operative uncorrected VA in the operated eye at discharge
- Surgical technique (Phaco, SICS, ECCE)
- Use of IOL (Power & SN)

2. Phase II: Assessed 4-5 weeks post surgery

- Date of follow-up (between 4 to 6 weeks)
- Post-operative presenting VA
- Post-operative best corrected VA
- Cause of poor visual outcome (Refractive errors, Surgical Complication, Inappropriate Case Selection/co-morbidities)

4. Refreshing Basic Eye Exam Practice and Refractive Training

The optometrist and ophthalmologist of Oudomxay Eye Care Unit and LRF's president provided theoretical and practical training to the recently certified ophthalmic nurse of Houn district hospital regarding basic eye examination, refraction and the correction of myopia, hyperopia and astigmatism. Training also included how to use and maintain basic refractive equipment.

5. Screening Vision for Student in Schools

A team including one ophthalmologist, an ophthalmic nurse (refraction trainee) and LRF's president were met by teachers of 2 secondary schools of Xai and Houn districts of Oudomxay Province to screen student's visual acuity. The children were screened using a Snellen chart. The students identified with vision impairment were further examined by the ophthalmologist who would identify the causes of blurred vision. They were tested to determine if vision could be improved with glasses. The screening was also an opportunity to increase teachers' awareness of eye care.

VIII. RESULTS

A total of 63 (F37) surgeries were performed as follow:

1. Caract Surgery Outcome (54 cases)

- Cataract Patient age and gender

Age group (year)	Female	Male
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1-14	0	0
15-49	0	3
50+	31	20
Total	31	23

- Pre-operative best corrected visual acuity (VA) in the operated eye

Vision level	Qty.	Percent
Good ($\geq 6/18$)	1	1.85%
Moderate ($< 6/18-6/60$)	19	35.19%
Poor ($< 6/60$)	34	62.96%
Total	54	100.00%

- Post-operative uncorrected VA in the operated eye at discharge

Vision level	Qty.	Percent
Good ($\geq 6/18$)	26	48.15%
Moderate ($< 6/18-6/60$)	24	44.44%
Poor ($< 6/60$)	4	7.41%
Total	54	100.00%

- Surgical technique (Phaco, SICS, ECCE)

Technique	Qty.	Percent
Phaco	46	82.69%
SICS	8	17.31%
ECCE	0	0.00%
Total	52	100.00%

- Use of IOL (Yes/No)

Use of IOL	Qty.	Percent
Yes	54	100.00%
No	0	0.00%
Total	54	100.00%

- Cause of poor visual outcome

Cause	Qty.	Percent
P/C tear, vitreous loss	1	
Corneal edema	2	
Inappropriate Case Selection/co-morbidities	1	
Total	4	

2. Other Surgery Outcome

A total of 9 other surgeries were performed as follow:

- Pterygium 06
- Eye injury 02
- Trichiasis 01

3. Refractive Training Outcome

1 trainee, Ms. Khamman Yabee trained for 10 days in the OPD room and refraction service facility of the Eye Unit of Oudomxay Provincial Hospital. At completion of her training, the trainee was found adequately prepared to:

- Use eye equipment in OPD room (Slit lamp, direct ophthalmoscope, tonometer, etc.)
- Use refractive equipment (trial lens set, auto-refractor, phoropter, etc...)
- Cut lenses by auto and manual lens edger

She will get more practical experience in Houn district hospital and at the newly opened optometry shop in Houn. However, we encourage her to pursue further training opportunities when available.

4. Screening Vision for Student at School

In total, 145 children (F 66) aged 12-18 years old randomly selected were screened. 3 students (2.07%) were found with vision impairment that included corneal scar and posterior segment disease. This number is lower than numbers of neighboring countries.

5. Other activity

An optometry shop was set up in Houn district, to provide sustainable refractive service to the local community and generally improve vision.

IX. BUDGET-EXPENDITURE

The actual expenditure for this mission was 33,305 USD, supported by Lao Rehabilitation Foundation, Inc. in cooperation with SEE International. It included:

- Medical supplies for cataract surgery	16,200 USD
- Transportation/Accommodation for LRF team	4,635 USD
- Finding cataract patients in villages	270 USD
- Providing refractive equipment	12,000 USD
- Other	200 USD

X. NEXT MISSION PLANNING

- Continue to provide mobile eye care (cataract surgery by phacoemulsification) in Luang Prabang during May 2020.
- Continue refraction exams and provide eyeglasses as needed.

Director of Oudomxay
Provincial Hospital



ດຣ. ຄຳພັນ ໄຊຍະວົງ
Dr. Khamphan XAYAVONG

Presenter

ດຣ.ເພັດສະໝອນ ອິນດາລາ
Phetsamone INDARA MD.