Report of Mobile Health Care

For Dental, Ear Nose and Throat, Eye Diseases, Expectant Mothers and Pediatric Services

at BanKhouang Health Center
Namor District of Oudomxay Province, Lao PDR.

September 30 - October 3, 2015

Supported by Lao Rehabilitation Foundation, Inc.
Dear / To:  Director of Oudomxay Provincial Public Health Department  
President of Lao Rehabilitation Foundation, Inc. USA.

Subject:  Results of Mobile Health Care For Dental, Ear Nose and Throat, Eye Diseases, Expectant Mothers and Pediatric Services at BanKhouang Health Center

- Refer to LRF 2015 planning of mobile health care in remote areas.
- Refer to LRF funding for this mission.

I.  TITLE

Mobile Health Care for Dental, Ear Nose and Throat, Eye Diseases, Expectant Mothers and Pediatric Services in the Remote Area of Namor District

II.  BACKGROUND INFORMATION

1.  Background of Namor district, Oudomxay Province

Namor district is one of 7 districts of ODX province. The population numbers 38,891 people (2014), it includes 62% LaoTheung (Khmou), 24% LaoLoum, 11 % LaoSoong (Kmong) and other 3%. The economy is mainly agricultural and farming.

Health care in Namor district is provided by 9 health centers covering 74 villages.

BanKhouang is one of the 9 health center of Namor district, it covers 9 villages with a catchment population of 4,516. It includes LaoLoum 3 villages, Khmou 3 villages, Hmong 2 villages and Akha 1 village. 90% of the land is in high mountains. The health center is located at 28 Km from Namor city and is accessible by dirt road only (1.5 hours).

There are 6 nurses at the health center. The main activities of the health centers are disease prevention,
health education, vaccine injections, dispensing vitamin A and parasite medication, providing basic treatment and referring difficult cases to the district hospitals. Unfortunately, doctors and diagnostic equipment are severely limited.

This is LRF’s forth mobile health care mission in Namor district by a team of health care providers from Oudomxay provincial hospital.

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.
- Provide human resource development for the health center medical staff by donation of medical equipment and training.

IV. TARGET
- Provide service to a total target of 1,200 patients as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Treatment</th>
<th>Target</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dental</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Eye</td>
<td>150</td>
<td>Cataract surgery 10 cases</td>
</tr>
<tr>
<td>3</td>
<td>ENT</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Internal medicine (adult)</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Pregnancy</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Infant and child</td>
<td>230</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Student at elementary school</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand total</td>
<td>1,200</td>
<td></td>
</tr>
</tbody>
</table>

V. LOCATION AND DURATION
- At BanKhouang Health Center, Namor district of Oudomxay province
- Service for 04 days (September 30 to October 3, 2015)

V. TEAM WORK

The team work of 18 persons includes:

**Oudomxay Hospital (9):**
- Ophthalmologists 2
- Dentists 2
- Gynaecology nurse 1 (military hospital)
- Ophthalmic nurse 1
- Nurse assistants 3

**Namor district hospital (2):**
- Internal medicine doctor 1
- Nurse assistant 1

**Local staff (5):**
- Nurse assistants 5

**US Team (2):**
- President of LRF 1
- Coordinator 1
VI. 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. This includes:

1. Instruments and medicine for dental services
2. Instruments and medicine for ENT services
3. Instruments and medicine for eye services
4. Instrument and medicine for internal medicine (adult) service
5. Instruments and medicine for expectant mothers services
6. Instruments and medicine for pediatric services

VII. PLANNED ACTIVITIES

- 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 8 main areas of health care as follows:

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
   - Repair teeth
   - Oral health education

2. Examination and treatment of E.N.T diseases:
   Jointly with the eye team, the E.N.T. team performed the following activities:
   - Treat otitis media
   - Remove foreign body from E.N.T.
   - Treat E.N.T. infections

3. Examination and treatment of eye diseases:
   The eye team (2 ophthalmologists assisted by 1 ophthalmic nurse) performed the following activities:
   - Vision test by E-Chart or Snellen Chart
   - Diagnosis with medicinal treatment for some eye diseases
   - Eye disease surgery when needed (Pterygim and eyelid disease)
   - Cataract surgery with implant IOL
   - Refractive service with donation of glasses for refractive error and presbyopia

4. Examination of adult for internal medicine diseases:
   The internal medicine team (2 doctors and 1 nurse assistant from Namor district hospital, performed the following activities:
   - General adult examination
   - Examination of internal organs by ultrasound echography.
   - Diagnosis of diseases and medicinal treatment
   - Health education
5. **Examination of expectant mothers:**
   Obstetric team (1 OB, ultrasound nurse from military hospital) performed the following activities:
   - General examination
   - Examination of fetus by echography
   - Distribution of vitamine (iron and pre-natal)
   - Health education and advice for follow up hospital visits

6. **Examination of infants and children:**
   Jointly with internal medicine, the pediatric team performed the following activities:
   - General pediatric examination
   - Diagnosis of infectious disease and medicinal treatment
   - Health education

7. **Dental screening of children**
   President of LRF with dental team performed the following activities:
   - Dental examination
   - Fluoride varnish application
   - Donation of toothbrushes and toothpaste
   - Donation of school supplies

8. **Health Center Development Activities Performed**
   Medical equipment was donated to health center. Training in the use and maintenance of the donated equipment was also provided.

9. **Rehabilitation Activities Performed**
   Arrangements were made to provide care at Mittaphab hospital for a girl with an apparent tumor on the forearm that could not be treated at Oudomxay provincial hospital.

**X. RESULTS**

A total of 1,488 cases (female: 868 or 58.3%) were treated free of charge with no regard to gender, age, ethnicity or religion. Services included:

<table>
<thead>
<tr>
<th>No</th>
<th>Examination &amp; Treatment</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dental</td>
<td>209</td>
</tr>
<tr>
<td>2</td>
<td>ENT</td>
<td>109</td>
</tr>
<tr>
<td>3</td>
<td>Eye</td>
<td>222</td>
</tr>
<tr>
<td>4</td>
<td>Expectant mother</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Internal medicine (adult)</td>
<td>473</td>
</tr>
<tr>
<td>6</td>
<td>Pediatric (infant and child)</td>
<td>177</td>
</tr>
<tr>
<td>7</td>
<td>Children of Primary School</td>
<td>286</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1,488</strong></td>
</tr>
</tbody>
</table>

1. **Dental Results**

209 (F 115) patients were examined and treated as follows:
- Dental extraction : 85
- Tooth repair : 79
- Dental cavities non extraction and dental education : 40
- Cleaning : 05
2. **E.N.T. Results:**
109 (F 59) patients were examined and treated as follows:
- Otitis media (chronic) 43
- Neuro sensorial hearing loss 28
- Ear removal of foreign bodies 17
- Polyps/sinusitis 06
- Pharyngitis 05
- Otitis media (acute) 04
- Tonsillitis 03
- Goiter/Hyper thyroid 02

3. **Eye Results**
222 (F 120) patients were examined and treated as follows:
- Vision test by E-Chart or Snellen Chart 211
- Diagnosis with medicinal treatment for eye diseases 128
- Cataract surgery with implant IOL 07
- Other eye disease surgery (Pterygim and eyelid disease) 02
- Refractive service with donation of eyeglasses for refractive error and presbyopia 82

4. **Obstetric Results:**
12 pregnant patients were examined by echography all pregnancies were normal

5. **Internal Medicine (adult) Results:**
473 (F 338) patients were examined and treated as follows:
- Gastritis 130
- Musculoskeletal/Flank pain 126
- Head ache 47
- HTA 37
- Angina 28
- Arthritis 14
- Pharyngitis/bronchitis 21
- Pneumonia 18
- Parasite 12
- Kidney stone 11
- Skin infection 09
- Goiter 09
- Asthma 05
- Cold fever 05
- Diarrhea 04
- Vaginitis/cyst ovary 03
- Hernia 02
- Other 06
- 27 patients were examined by echography

6. **Pediatric Results:**
177 (F 90) patients were examined and treated as follows:
- Parasites 35
- Angina 29
- Pneumonia 24
- Malnutrition 17
- Skin infection 17
- Tonsillitis 16
- Diarrhea / dysentery 15
- Cold fever 13
- Pharyngitis / Bronchitis 09
- Anemia 02
- Other 01

7. **Primary School Screening Results:**

286 children (F 134) were screened.
- All children received fluoride varnish application with distribution of toothbrushes and toothpaste.
- Educational supplies were also donated to students.

8. **District Hospital Development Activities Performed**

Medical equipment was provided to BanKhouang health center, it included: Sphygmomanometers (adult and child sizes) with stethoscopes, small surgery set, delivery set, electric autoclave, ultrasonic pocket doppler, nebulizer, otoscope, other necessary medical equipment and some medicine. LRF also provided training in the use and maintenance of the donated equipment.

VIII. **BUDGET and EXPENDITURE**

Not including travel from US, transportation of equipment, supplies, and related costs, the anticipated budget for this mission was 13,212 USD. The actual expenditure for this mission was 11,818 USD, it included:

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>Amount (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medicine from USA</td>
<td>1,800</td>
</tr>
<tr>
<td>2</td>
<td>Equipment from USA</td>
<td>3,200</td>
</tr>
<tr>
<td>3</td>
<td>Medicine from Laos</td>
<td>2,236</td>
</tr>
<tr>
<td>4</td>
<td>Accommodation of LRF team</td>
<td>840</td>
</tr>
<tr>
<td>5</td>
<td>Perdiem and accommodation of Lao team</td>
<td>930</td>
</tr>
<tr>
<td>6</td>
<td>Preparing mission</td>
<td>68</td>
</tr>
<tr>
<td>7</td>
<td>Pick up (4WD) rental and fuel</td>
<td>1,035</td>
</tr>
<tr>
<td>8</td>
<td>Eye care</td>
<td>1,263</td>
</tr>
<tr>
<td>9</td>
<td>Student at primary school care</td>
<td>219</td>
</tr>
<tr>
<td>10</td>
<td>Other</td>
<td>227</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>11,818</strong></td>
</tr>
</tbody>
</table>

**Note:** The instruments, medicine and supplies for eye service were provided by Fred Hollows Foundation, Australia.
XI. ACCOMPLISHMENTS AND WEAKNESSES

1. Accomplishments
   - Good cooperation with the Namor district public health department and BanKhouang health center staff.
   - 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.
   - Provided some medical equipment to improve health care in BanKhouang health center.

2. Weaknesses
   - Limited specialized teamwork (pediatrics and internal medicine)
   - Given the rainy season, access on dirt road was difficult and took time.
   - The number of patients (adult internal medicine) was higher than expected, thus the internal medicine team could not provide service to all patients.
   - The number of pregnancies showing up at the center was low.

XII. NEXT MISSION PLANNING (under consideration)

   - Provide mobile health care for dental, ENT, eye, internal medicine, expectant mother and infectious disease in children at one or two Health Center in Oudomxay in February 2016.
   - Will increase teamwork and time for service.

Director of Oudomxay Provincial Hospital

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Director of Oudomxay Provincial Health Department

Dr. Khamphon XAYAVONG
ATTACHMENT DOCUMENTS

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