Capacity Assessment and Development of Plan to Increase Capacity of Laos Rehabilitation Workforce

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World Education

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Capacity Assessment and Development of Plan to Increase Capacity of Laos Rehabilitation Workforce

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Abbreviations

Centre for Medical Rehabilitation (CMR)
Cooperative for Prosthetic and Orthotic Enterprises (COPE)
Faculty of Medical Technology (FMT)
International non-government organisation (INGO)
Ministry of Health (MOH)
Ministry of Labour and Social Welfare (MLSW)
Non-government organisation (NGO)
Occupational Therapists (OTs)
Physiotherapists (PTs)
Physiotherapy (PT)
Prosthetists and Orthotists (P&Os)
Provincial Rehabilitation Centre (PRC)
University of Health Sciences (UHS)
WHO Western Pacific Regional Office (WPRO)
EXECUTIVE SUMMARY

This study titled Capacity Assessment and Development of Plan to Increase Capacity in Laos Rehabilitation Workforce was carried out in May-June 2015 funded jointly by WHO Western Pacific Regional Office, Handicap International Lao PDR Program, and World Education.

The study aimed to provide an in-depth analysis of the rehabilitation workforce in Lao PDR building on the work conducted in the Rehabilitation Sector Situation Analysis Report Lao PDR April – May 2013 (Llewellyn, 2013). The study was conducted by way of desk and literature review, data collection by a national consultant based on the Rehabilitation Workforce Mapping template designed for the study, and focus groups and interviews during an in-country visit from May 25th to June 2nd 2015. Forty rehabilitation personnel from Vientiane hospitals including CMR and 13 personnel from other organisations and government departments took part in the focus groups or interviews.

The findings from this study demonstrate that the rehabilitation workforce in Lao PDR is at an early stage of development, despite its longevity, when compared to neighbouring countries in the region. Although most rehabilitation personnel in Lao PDR are physiotherapists (PTs) with training in PT in Lao PDR being offered since 1968, the highest proportion of the 1168 graduates (n=1069, 91.5%) have a certificate/ diploma issued from the former College of Health Sciences. The minority (n=99, 8.5%) have the higher qualification called an Associate Degree. A new four year baccalaureate program in PT at began in 2014 with 28 students at the Faculty of Medical Technology (FMT) University of Health Sciences (UHS) in Vientiane. This cohort will not graduate until 2018.

This means that there are no PTs trained in Lao PDR who have achieved international standard physiotherapy qualifications at this stage. There are no trained occupational therapists (OTs) in the country. There are 16 PTs at CMR who have had short course OT training and support from an OT adviser.

The situation with Prosthetists and Orthotists (P&Os) is somewhat different. There are currently two international standard Category 1 P&Os in Lao PDR, 2 Category 2 P&Os, 5 Category 2 who are Prosthetists only, and 3 who are Orthotists only; there are also 13 bench technicians. An Associate Degree program in P&O commenced at FMT in 2012 and there will be 8 graduates in August 2015. There is only one medical doctor with rehabilitation specialist qualifications in Lao PDR; it was not possible to ascertain the number of orthopaedic specialists.

The official Ministry of Health (MOH) PT workforce (as of 2012) is 284 of which 215 are in government posts with the remaining 69 contractual, temporary staff or volunteers. The urban: rural distribution ratio is 64% to 36%. PTs are unevenly distributed within the Vientiane capital; over one third (n=55, 39%) are employed at the Centre for Medical Rehabilitation (CMR). The P&Os are only employed at CMR and the 4 Provincial Rehabilitation Centres (PRCs) associated with CMR, which are located in Champasak, Luang Prabang, Xieng Khouang, and Savannakhet provinces.

Many if not most of the government PT workforce reportedly also work in private clinics as do other health workers in Lao PDR. It is not possible to account for the large discrepancy between the overall number of 1168 PTs trained since 1968 and the MOH official PT workforce number of 284. How many of the graduates are employed in solely private clinics, are not employed, or are employed but not as physiotherapists is not possible to determine.
There are distinct challenges for the rehabilitation workforce in Lao PDR. These are detailed in the Findings section of the report. Briefly, these include older style training and poorly resourced infrastructure and teaching materials; under-employment of graduates; low standard qualifications compared to regional and international standards; very limited opportunities for upgrading qualifications in Lao PDR or in other countries; very limited opportunities for continuing education except for those staff employed at CMR and the associated PRCs; a distinct absence of clinical guidelines and standards of practice; and, isolation of PTs in their hospital units with little contact or cross-fertilisation of knowledge or expertise.

However there are also opportunities for increasing the capacity of the rehabilitation workforce in Lao PDR. International initiatives such as the WHO Global Disability Action Plan Better Health for All People with Disability 2014-2021, regional rehabilitation consultations and workshops in 2013-2014, and the Lao PDR National Rehabilitation Forum in August 2014 have all contributed to increased attention to rehabilitation and disability in Lao PDR. There is a National Disability Inclusive Health and Rehabilitation Strategic Action Plan under development and proposed inputs on rehabilitation to the MOH Health Development Plan 2016-2020. These national developments augur well for planned strategic action, implementation and outcomes in the rehabilitation sector in Lao PDR.

The long term goal in relation to the rehabilitation workforce is to: “By 2030 achieve a sustainable rehabilitation workforce trained to international standards serving urban and rural communities to increase social and economic productivity of the Lao PDR population”.

Three priority areas that need to be addressed to begin the work needed to progress towards this long term goal. An overall outcome, rationale and specific outcomes are presented for each.

Priority 1. CMR, Vientiane hospitals and FMT to work together to build capacity in existing rehabilitation workforce in Vientiane including professional network to develop standards of practice and clinical guidelines

Priority 2. Critical mass of higher capacity rehabilitation workforce in Vientiane is responsible for building capacity in rehabilitation workforce in provincial and district hospitals as well as PRCs

Priority 3. Build competent new rehabilitation workforce and upgrade qualifications and capacity of academic staff at FMT

There are nine recommendations to move forward to build capacity in the rehabilitation workforce in the short and medium term. The successful achievement of the specific outcomes detailed in the report will depend on rehabilitation sector leadership from CMR and overall and effective working collaborations between CMR, the development partners, COPE and the Faculty of Medical Technology. Together, as a stronger voice, they will have more opportunity for success in attracting government support and donor funds to increase capacity and to achieve the desired outcomes.
RECOMMENDATIONS

CONTINUING EDUCATION AND UPGRADING QUALIFICATIONS OF EXISTING WORKFORCE

RECOMMENDATION 1
Develop and implement 5 year continuing education strategy for all Vientiane rehabilitation staff including CMR to undertake short course training together and expand this later to provincial and district hospitals

RECOMMENDATION 2
Develop and implement schedule for systematic upgrading of qualifications to Associate Degree for PTs in the MOH workforce in Vientiane

RECOMMENDATION 3
Select high performing PTs at CMR who have already completed short course OT training to undertake international standard baccalaureate occupational therapy program in neighbouring country

PROFESSIONAL NETWORK, MENTORING AND DEVELOPING STANDARDS OF PRACTICE

RECOMMENDATION 4
Identify, support and utilise a cadre of more expert PTs and P&Os in Vientiane as leaders and role models to create a rehabilitation network to develop national standards of practice and clinical guidelines

RECOMMENDATION 5
Utilise this cadre of more expert PTs and P&Os to provide a systematic schedule of training and mentoring to PTs in provincial and district hospitals and PTs and P&Os in the PRCs

RECOMMENDATION 6
Develop and implement strategy for succession planning and mentoring for rehabilitation personnel in CMR, the hospitals in Vientiane and the PRCs

UPGRADING QUALIFICATIONS FOR STUDENTS IN TRAINING AND STAFF AT FMT

RECOMMENDATION 7
Prioritise the entry level PT and P&O programs at FMT to build a new, competent rehabilitation workforce by ensuring allocation of best and most highly qualified teachers and the highest possible standard of clinical placements for students in these programs

RECOMMENDATION 8
Identify and seek funding to support high achieving students with good English (or French) language proficiency in the baccalaureate PT program (at least 5, more if possible) and P&O Associate Degree program (at least 3, more if possible) to complete their qualifications to international standard in a neighbouring country or countries.

RECOMMENDATION 9
Develop and implement structured professional and academic development and succession planning to create the next generation of academic leaders at FMT.
BACKGROUND

The health sector in Lao PDR is undergoing Health Sector Reform. The (Draft) Strategy for Health Sector Reform by 2020, 28th February 2013 focuses on advancing progress toward meeting the Millennium Development Goals. This broad policy document sets out a Master Plan on five priority areas: (1) human resource development (2) health financing (3) organization, management and working style (4) health services and information (5) monitoring and evaluation. The main healthcare delivery system of the Lao People’s Democratic Republic is a government-owned, public system that operates health centres and district and provincial hospitals. The public health system has a strong vertical structure and is divided into three main arms: (1) health care (2) prevention, promotion and disease control (3) health management and administration.

The estimated population of the Lao People’s Democratic Republic in 2013 was 6.77 million (World Bank, 2015). Current figures available from the Laos Statistics Bureau report 6.771 million (Laos Statistics Bureau, 2015). The latest figures for people with disabilities come from 2005 Lao PDR Census which records 70,260 persons with disabilities (1.3% of the population). This is likely to be an underestimate and reflects the limited disability measurement approaches. The World Report on Disability (World Health Organisation, 2011) estimates 10% of the global population have a significant disability. Using 2013 World Bank Lao PDR population figures, this would equate to approximately 677,000 people with disabilities in Lao PDR. Health trends in Lao PDR suggest it is experiencing similar trends to many countries with increasing disability as a result of non-communicable disease, ageing populations and road traffic injuries.

The situation of rehabilitation in Laos was documented by the WHO Rehabilitation Sector Situation Analysis Report 20131. This report found that Lao PDR, as with many other low income countries in South East Asia, faces challenges when providing disability and rehabilitation services. Some of these challenges come from the country’s landlocked geography; the nature of the country’s geography with transport options being particularly limited during the monsoon season; a relatively small population in a country of reasonable size with few centres of significant population density; and, distant rural villages including a substantial population of minority groups. Other challenges stem from socio-economic factors and the relatively recent emergency of national educational institutions capable of developing a health workforce.

Recommendations from the Rehabilitation Sector Situation Analysis Report 2013 highlighted utilising the existing structure to develop higher quality and coordinated delivery of rehabilitation services at tertiary, secondary and primary levels; focus on leading rehabilitation initiatives, implementing them on pilot sites initially and evaluating impact; and developing cross-sectoral collaboration and coordination by building stronger relationships with disability sector stakeholders and the University of Health Sciences.

Currently MOH is finalising the MOH Health Development Plan 2016-2020. Rehabilitation and disability are mentioned in the draft document, and accordingly a national disability inclusive health and rehabilitation strategy is needed to guide activities and annual work plans over the next five years.

1 Llewellyn (2013). Rehabilitation Sector Situation Analysis Report Lao PDR April – May 2013
In August 2014, supported by WPRO and CMR, a National Forum was held in Vientiane with participants from various ministries, the provinces, NGOs and INGOs to consider the first draft of such a plan, guided by international developments including the *WHO Global Disability Action Plan 2014-2021*. Over the past year, MOH with support from WPRO and Handicap International have conducted a series of consultations on how Lao PDR health sector can strengthen the provision of rehabilitation services. There is now a revised draft National Disability Inclusive Health and Rehabilitation Strategy with accompanying Action Plan which is to be finalised in June 2015.

The *WHO Human Resources for Health. Lao People’s Democratic Republic* (2013) (hereafter referred to as the 2013 *WHO HRH LPDR Report*) reports that Lao PDR suffers from a critical shortage of health workers with only 2.17 health workers per 1000 density. The University of Health Sciences is responsible for training of health workers. The Faculty of Medical Technology is responsible for Physiotherapy (PTs), Laboratory, Medical Technology and Prosthetic & Orthotic Training (P&O). CMR, working closely with MOH, recognises the need to further strengthen the rehabilitation workforce of the country. CMR is currently working with World Education Team to develop a project proposal to provide institutional support to the Ministry of Health to formulate a human resources development plan for the sector of Physical and Rehabilitation Medicine for the next decade or even for the next two decades. The first step agreed by WHO, World Education, Handicap International and other stakeholders, was to conduct an in-depth situation analysis of the existing and available workforce in Physical and Rehabilitation Medicine in Laos. This in-depth study is the subject of this Report. The study complements the development of the ‘Draft National Disability Inclusive Health and Rehabilitation Strategy 2016-2020’ and will inform further actions aimed at rehabilitation workforce development.

**Purpose**

The purpose of the study was to work with Handicap International, World Education and CMR to map the existing rehabilitation workforce and analyse the situation of the rehabilitation workforce, for example their current capacities and challenges. As well as analysing the situation the purpose was to consult nationally and develop a strategic plan to build rehabilitation workforce capacity.

**Objectives**

The objectives were stated as:

- Support the mapping of available rehabilitation workforce in the country, including an inventory of trained rehabilitation personnel (Physiatrist, Physiotherapists, Prosthetists & Orthotists, Wheelchair Technicians, etc).

- Create a profile of the available rehabilitation workforce, outlining basic demographic information, training background, work experience and personal professional development experience. The mapping should respond to the questions of who rehabilitation health workers are (which categories exist in Lao PDR), their numbers, training, at which facilities they are employed, and their geographical distribution.

- The profile should also include mapping and capacity assessment of the education facilities for production of the rehabilitation health workforce.
• Analyse the situation of the rehabilitation workforce, provide recommendations to address the gaps and develop a strategic action plan /road map of concrete steps to improve the capacity of the rehabilitation workforce.

• Assessment could include their working environment, working conditions, whether they are able to perform what they are trained for, their motivation, and capacity of the education institutions, etc. It was also thought it may be useful to get a sense whether there is interest among the pool of applicants to higher education in rehabilitation health professions, etc.

• Develop recommendations which should cover a period of continuum; (a) short term to compensate for gaps; (b) mid-term to build the foundation for the future; and, (c) long term to achieve and sustain optimal human resources capacity.

**Methodology and Activities**

The proposed methodology and activities required the following:

• Initial Activity will be to develop a template and methodology for mapping of existing rehabilitation workforce for the national project officer (supported/supplied by World Education), this could occur during February and March 2015. Filling in the templates is estimated to take 10 days.

• Collate mapped information and analyse findings. Consider current health workforce situation, planning and responses. Consider current workforce situation and estimate current and future needs.

• Undertake visit to Laos, interview key informants and stakeholders and conduct a consultation aimed at presenting findings and consulting on steps forward.

• Write a final report on the Rehabilitation Workforce Situation with recommendations for clear, sequential steps forward in both the short and long term.
THE STUDY

The study was undertaken in two parts. Part I involved developing a Rehabilitation Workforce Mapping template. Using this template, a national consultant collected data on the existing rehabilitation workforce. Part II required an in-country visit to investigate the rehabilitation workforce situation, and barriers and opportunities for developing capacity in the Lao PDR rehabilitation workforce. Recommendations for the short and long term were developed from all the activities undertaken during the study. These include desk review, accessing literature, analysis of the data gathered by the national consultant and from the focus groups and interviews during the in-country visit.

PART I. TEMPLATE AND METHOD FOR MAPPING EXISTING REHABILITATION WORKFORCE

The Rehabilitation Workforce Mapping template was developed based on:

(i) review of the literature on health workforce (see references in Annex 1);
(ii) existing publications on health workforce in Lao PDR including the 2013 WHO HRH LPDR Report; and
(iii) standard formats for collecting and reporting data on health workforce which include disaggregation of rehabilitation personnel within the health workforce.

The template was forwarded to Handicap International and World Education, and following discussion, was revised ready for use by end of April 2015. The initial and revised templates are appended in Annex II. Dr Singkham Phoumiphak, Orthopaedic Surgery Division, CMR was delegated as the national consultant to collect the data needed for completion of the Rehabilitation Workforce Mapping template prior to the in-country visit.

PART II. IN COUNTRY-VISIT FOR FOCUS GROUPS, INTERVIEWS AND CONSULTATIONS

Key Informants

The study received ethics approval from the University of Sydney Human Ethics Approval No. 2015/289. Participant Information Sheets (PIS) and Consent Forms (PCF) were generated for groups of key informants: rehabilitation personnel, INGO and NGO, government officials, and staff from the University of Health Sciences. The PIS and PCF for rehabilitation personnel are appended as an example in Annex III.

Focus groups and interviews took place from Monday 25th- Friday 29th June. These were arranged by Ms Laurence Degreer, Technical Advisor, Handicap International based on availability and list of desirable key informants forwarded prior to the in-country visit. All took place in Vientiane capital with the exception of the visit to Sikerth Vocational Rehabilitation Centre which is located in Vientiane Province. Details about the key informants, their organisations and date of focus groups are appended as Annex IV. Table 1 in Annex IV relates to hospitals; Table 2 relates to other organisations and government departments.
In total 40 rehabilitation personnel from rehabilitation units and the one specialist rehabilitation facility (CMR) participated in focus groups. By far the majority were physiotherapists (PTs), the number of which was 27 out of a total of 40 participants (67%). As can be seen from Annex IV, Table 1 key informants were primarily more senior rehabilitation personnel in the facilities with higher numbers of PT staff (for example, Mittaphab and Mahosot Hospitals and CMR). This is not surprising given the hierarchical structure of health facilities, the lack of recognition by senior staff of the knowledge and expertise of more junior clinicians, and the resulting ‘backgrounding’ of junior clinicians in rehabilitation units.

A further 13 key informants from other organisations and government departments participated in focus groups or one-on-one interviews. Just over half (n=7, 53%) had also participated in focus groups and interviews for the Rehabilitation Sector Situation Analysis Report Lao PDR 2013. These key informants are in a different position than hospital staff to consider and discuss the rehabilitation health workforce in Lao PDR. They hold more senior policy, programming and/or planning roles and responsibilities, and support roles as partner organisations (e.g. COPE) in relation to rehabilitation including workforce issues such as pre-service and continuing education, recruitment, service delivery and capacity building.

**Key Informant focus group/ interview schedule**

An interview schedule was developed from the health workforce literature with reference to the Rehabilitation Sector Situation Analysis Report Lao PDR 2013 (Llewellyn (2013), 2013 WHO HRH LPDR Report, and a standard format utilised by Health Workforce Australia (2014). The focus group/ interview schedule is appended as Annex V. Key and probe questions were used as appropriate. Focus groups/ interviews were held at key informants’ workplaces and lasted from 1-2.5 hours.

**Caveats and limitations of data available and analysis**

There are several caveats that should be kept in mind when reviewing the data collected for this study.

The **first** caveat is the difficulty in accessing reliable health workforce data because the only official data available relates to MOH employees, both those who are in government posts, and those who are contractual staff. This data is primarily at provincial level and by category of health worker (in relation to rehabilitation this is limited to Physiotherapist). There is some capacity for analysis for example by urban or rural distribution as presented in the 2013 WHO HRH LPDR Report. However, missing from this is the level of granularity which would assist in planning for building the rehabilitation workforce.

The **Rehabilitation Mapping Template** provided a potential opportunity to gather more finely grained data in relation to categories of rehabilitation workers. However the data sourced by Dr Singkham came only from annual hospital returns, which do not include the level of analysis required to present an accurate account of rehabilitation health personnel. Further, the data was not checked with provincial or hospital departments. More complete data was available for the hospitals in Vientiane capital and the four Provincial Rehabilitation Centres who submit an annual return to CMR. There was very limited data available from other provinces in relation to rehabilitation personnel.

The **second** caveat is that there are rehabilitation health personnel working in facilities that are not under MOH. The first of these are P&O technicians (wheelchairs, mobility equipment and repair of prosthetics and orthotics) who are employed by the Ministry of Labour and Social Welfare (MLSW)
at Ban Kern Technical Workshop\(^2\). This Technical Workshop currently only provides services to ex-military invalids. It does not supply assistive devices and mobility equipment but does repair these. However, currently there are 10 people from this facility training in Vietnam to become prosthetic and/or orthotic technicians. There are 2 teams: one team is at the University Hospital in Da Nang, the other is in Hanoi. When these teams return to Lao PDR they will be supported by a mentor and trainer from Vietnam; the Ban Kern workshop has been refitted with new machinery supplied by Vietnam. The new Ban Kern facility will open in August 2015 and extend its services from ex-military personnel (from all over Lao PDR) to include people from Ban Kern district (around 200,000 population). MLSW is discussing with CMR about having their own quota of PTs and P&Os at Ban Kern to provide a rehabilitation service\(^3\).

The third caveat is that there are also rehabilitation health personnel who work in private clinics which are seemingly plentiful in Vientiane (it is unclear whether these exist in other parts of Lao PDR). Thus there is a larger rehabilitation workforce than the MOH data suggests in terms of the services provided in Lao PDR. In addition, and as noted later in the findings, it is very common for MOH employees to own or be employed in private clinics – including medical doctors related to rehabilitation such as orthopaedic surgeons, the one rehabilitation specialist in Lao PDR and (it appears) almost all MOH PTs - in addition to their government posts (or contractual positions). The presence of private clinics is also noted in the 2013 WHO HRH LPDR Report.

This means that the overall availability of rehabilitation services is greater than the official MOH data on government posts and contractual employees suggest. It is however not possible to quantify this additional workforce comprised of at least three groups: (i) rehabilitation personnel working as volunteers in MOH hospitals in Vientiane or in provincial or district hospitals; (ii) those working solely in private clinics in Vientiane or in the provinces; and, (iii) those who hold a government post (or a contract) and also provide rehabilitation services through a private clinic.

\(^2\) According to Mr Sybounhenang Sansathit, Head, P&O, CMR these are Category 2 level according to Lao PDR National standards. This level does not appear to equate to IPSO Category 2 level.

\(^3\) Information provided by Mr Bounpone Sayasenh, Director-General, Department of Pension, Invalid and Disability (DPID), Head Secretariat National Committee for Disabled People and Elderly (NCDE), Ministry of Labour and Social Welfare
FINDINGS

The findings are reported according to the three sections of the interview/ focus group schedule designed to align with the objectives of the study, namely, profile of the rehabilitation workforce; educating the rehabilitation workforce; and, key issues of capacity, challenges and opportunities for the rehabilitation workforce in Lao PDR.

1. Profile of Rehabilitation Workforce: Numbers and Distribution

The primary rehabilitation workforce in Lao PDR is physiotherapy. According to 2012 MOH official figures (which is the latest data available), there were 284 PTs as MOH health workers, of which 69 were contractual staff – the remaining 215 being in government posts (Department of Organisation and Personnel, Ministry of Health, 2012 and 2013 WHO HRH LPDR Report, Table 4, p. 5 and Table 5, p.6 respectively). There are no official figures for other categories of rehabilitation staff for example rehabilitation specialists, physiatrists, prosthetists and orthotists and bench technicians, occupational therapists or speech pathologists. This is because (as best as can be ascertained) the only MOH quota in the rehabilitation category is for physiotherapists.

The numerical data provided by Dr Singkham on rehabilitation workforce contains an overall summary of the physiotherapists in government posts in each province and by district (typically district hospital). This totals 215 PTs and is included in Annex VI, Table 3. This data, it is understood, came from annual MOH returns. The national consultant was unable to confirm this data by direct contact with the hospitals. The 69 PTs reported in official MOH data are missing from this data. Dr Singkham also produced other data relating to gender in the PT workforce in the Vientiane hospitals and in 4 provincial hospitals, however figures for each hospital in this data do not tally with the official MOH data or the summary data in Annex VI so this has not been included in this report.

The detailed data about rehabilitation staff who work at CMR and the PRCs is presented separately in Annex VI, Table 4. This data is a combination of information from Dr Singkham and from Cooperative for Prosthetic and Orthotic Enterprises (COPE), a non-government organisation (NGO) located on the CMR campus. The rehabilitation personnel at the 4 PRCs in Champasak, Xieng Khouang, Luang Prabang and Savannakhet provinces are not included in the MOH figures.

The PT numbers listed in the official MOH figures and the national consultant summary table represent PT positions in the provincial or district hospitals. As noted in the Rehabilitation Sector Situation Analysis Report Lao PDR 2013, although PT posts may be allocated to these district hospitals, it does not necessarily ensure that the person in the post is carrying out PT duties. When provincial and district hospital doctors do not understand the role of PT, then there are no referrals; when hospital directors have a shortfall in other staff then PTs can be re-allocated for example to clerical or other duties such as radiography technicians.

It is also important to remember that the rehabilitation staff at CMR and the 4 PRCs which are associated with CMR are funded by a variety of sources. Only some are government posts and others are contractual staff funded by CMR separately or temporary staff funded by COPE with donor funds. Also, rehabilitation personnel categories other than PTs are not included in the official MOH figures.
This means for example that the doctors that work at CMR – 12 - according to the national consultant’s data as in Annex VI, Table 4 cannot be separately disaggregated from MOH data on doctors in Vientiane hospitals. The P&Os that work at CMR and in the PRCs do not appear in any official MOH data. It was not possible to obtain data on the proportion of rehabilitation personnel who were working solely in administrative positions.

**Hospital Staffing**

The hospitals employ two types of rehabilitation staff. The first are permanent staff (government posts) and the second are called contractual or temporary staff (2013 WHO HRH LPDR Report). There are four types of contractual staff; official contractual workers hired before 2003 (when MOH still hired contractual staff), paid hospital workers, workers paid by donor funds, and volunteers who receive a stipend. All contractual workers (since 1983) have their salaries paid by an organisation other than MOH although their salary comes directly from their employing hospital. It was not possible to determine exactly how many staff and of which type (government post or contractual) were at each hospital. It seemed that disaggregation of information at this level was simply not known. In some instances, for example CMR, two categories of staff, temporary staff and volunteers, are both funded by COPE but paid by CMR, so it is not clear to employees who is in which category.

**Distribution of Rehabilitation Workforce: Urban to Rural**

The information in Annex VI, Table 3, lists numbers of PTs by province and districts within provinces. (This list only includes PT permanent staff of 215 – it does not include the additional 69 contractual staff detailed in the 2013 WHO HRH LPDR Report). Only a crude analysis of urban to rural distribution of rehabilitation workforce (PT only) is possible from this data. This analysis results in 138 PTs in Vientiane capital with the remaining 77 in rural settings which may or may not include urban as well as urban districts. This is a 64% urban: 36% rural distribution.

It is not clear what analysis was used to determine the urban and rural distribution in the 2013 WHO HRH LPDR Report. In that report the overall figure of 284 PTs (permanent and contractual), is 125 (44%) urban: 159 (56%) rural by a simple count on Table 6 (p.8). Unfortunately PTs are not included in the urban: rural distribution figure for other professions (Figure 4, p.9). The PT distribution calculated in this way when compared to professions in Figure 4 (p.9) contrasts for example with the distribution for Bachelor/ High Level Nurse (93% urban, 7% rural) and Pharmacist (78% urban, 22% rural). This is surprising and the reasons are not clear. It could be the case that there is a much higher proportion of PT contractual staff in rural areas than for the other professions. Why this would be the case however is also not clear. Without access to the raw data, and confirmation of this data it is very unwise to draw conclusions. For that reason the figures on urban: rural distribution based on the national consultant’s data are believed to be more reliable. This example of contradictory data illustrates the difficulty in obtaining reliable data across more than one source in Lao PDR.

**Rehabilitation Staff Ratios to Patient Population**

The 2013 WHO HRH LPDR Report provides figures on health workers per 1000 population in 2012 based on government posts and contractual staff. The figure of 284 PTs for a population at that time of approximately 6.4 million equals 0.04 PTs per 1000 population. What does this ratio mean in relation to other PT to population ratios? There are no agreed standards for PT to population ratios.
However as Gupta et al. (2011) note in an analysis of data from 67 countries[^1][^2]: “a plot of supply of selected categories of health professionals (physicians and PTs) against selected causes of YLL (years of life lost) shows a strong and negative relationship, suggesting that countries with the highest burden of disability-related health conditions simultaneously tend to be those with the lowest supply of health workers skilled in rehabilitation services” (p.7). The 2013 WHO HRH LPDR Report notes that overall “the Lao People’s Democratic Republic suffers from a critical shortage of health workers, with 2.17 health workers per 1000 population density” (pps. 4-5). The PT per 1000 population density at 0.04 is much lower than this.

Another way to consider the availability of rehabilitation personnel for the Lao PDR population is to calculate the PT to hospital bed ratio. This can only be done for the 284 government (permanent and contractual) PTs. This is a quite useful calculation because there are no MOH community PT services (only the private clinics as described below). According to the 2013 WHO HRH LPDR Report there are around 5000 hospital beds in Lao PDR, and no private hospitals[^3]. Using the 2012 whole of MOH PT workforce figure of 284, and 5000 beds, there is a PT to bed ratio of .05. The PT positions however are not equally distributed across the hospitals as can be seen in Annex VI Table 3 with 138 positions in Vientiane capital of which 55 (approx. 39%) are at CMR.

There is no agreed international PT to bed ratio. The need for PTs per bed is considered to be context dependent, for example with typically, higher demand in neurology (stroke), trauma (spinal cord injury, traumatic brain injury), and cardio-vascular pulmonary disorders (personal communication, Catherine Sykes, WCPT, May 25th 2015). Cartmill, Comans, Clark, Ash & Sheppard (2012) reviewed 12 papers located via a comprehensive literature review and found ratios between 0.73 and 1.25 recommended for PT in the general hospital setting. Only two papers specifically addressed PT ratios in rehabilitation: the Australian Faculty Rehabilitation Medicine (2005) recommended on average 1.185 PT to bed ratio (across different conditions) while the Allied Health in Rehabilitation Consultative Committee (2007) recommended 1.31 PT to bed ratio based on a list of similar conditions. Again these figures are much higher than the estimated PT to bed ratio in Lao PDR of .05.

STABILITY AND REFRESHING OF REHABILITATION WORKFORCE

BECOMING PERMANENT

The MOH rehabilitation workforce appears to be quite stable with little opportunity for refreshing with new personnel. Government posts are highly sought after given these are permanent and offer significant benefits including health insurance, although with a low salary. It may take several years for contractual staff to become permanent. For example, at Mahosot the newest member of staff was a 2011 graduate who had been temporary staff until October 2014 when she became permanent. This is because the quota of positions available at hospitals depends on the Ministry of


[^3]: Although several people mentioned the Chinese Hospital and the Vietnamese Hospital it was not possible to get any further information on these
Home Affairs annual quota for government health workers, a proportion of which is given to the MOH and then allocated to the various hospitals. A further distribution takes place at the individual hospital level. Departmental Heads appear to have no control over staff numbers; some years there is an additional position or positions, other years none. The only other way a new rehabilitation staff member could be taken on is if the hospital or a donor is able to separately fund a contractual, temporary or volunteer position.

NEW POSITIONS AND RECRUITMENT

When an additional government post becomes available, contractual staff are considered first in the recruitment process. This is done by considering their performance and the results of an examination. Staff may also be recruited from outside, these staff too have to undergo the same examination. This examination is one of several criteria as noted in the 2013 WHO HRH LPDR Report (pps. 20-21) for obtaining a government health worker post. Government posts may become available when a staff member retires but this is not guaranteed, as these positions belong to the MOH quota and can be reallocated elsewhere. Senior staff at the hospitals try to attract the best students/graduates as temporary staff (funded by the hospitals or donor); some new graduates however, even if offered positions in a Vientiane hospital, will still choose to go to a private clinic, where they can be assured of a better salary and a continuing position (subject to satisfactory performance). Overall it is fair to say that there is very little movement in the clinical rehabilitation workforce. (Technical positions primarily exist at CMR and the PRCs in the P&O department).

REMUNERATION

Government health workers’ salaries are determined according to the salary of civil servants. Physical therapists are classified as mid-level (typically a three year high level qualification – associate degree), for which the average monthly salary is 896,568 kip. This is the same as hygienists, X-ray technicians, laboratory assistants, medical assistants, support and logistic staff and middle level primary health care worker (2013 WHO HRH LPDR Report, Table 14, p. 18). Theoretically, once there are graduates from the FMT PT Bachelor course, these PTs would receive a higher salary in line with other Bachelor level graduates, for example, the Bachelor/ high level nurse or pharmacist (bachelor) at 1, 165 216 kip per month (2013 WHO HRH LPDR Report, Table 14, p.18). It is not surprising given the low salaries that some PTs have sought to become medical doctors (for example at CMR) to attain a position with considerably more status and great remuneration particularly at the Specialist levels (level 1: 1,257, 312, and level 2: 1,293,869). Some key informants talked about the lack of commitment and motivation of rehabilitation personnel possibly driven by their secure positions (if in government posts) and the low level of remuneration. It was also noted that there was little reason to work efficiently: none of the hospitals visited appeared to be particularly busy, with many vacant plinths and significant numbers of staff not occupied with patients.

PRIVATE CLINICS

As noted in the 2013 WHO HRH LPDR Report there are no private hospitals in Lao PDR. The report however notes that the private sector is expanding for example in pharmacies, private clinics and traditional medicine practitioners. There is regulation in relation to government personnel and private clinics, however this is not reinforced. There is a clear conflict of interest given the frequency with which senior government health workers own and/ or work in private clinics. This was explained by key informants in relation to needing to supplement their low salary as government health workers due to the high (and rising) cost of living in Lao PDR.
Two private clinics were visited in the time available, with key informants suggesting that all rehabilitation personnel (with the exception of P&Os) were involved in private clinics and as owners or employees in addition to their government posts or contractual positions. There are also PT staff who work full time at these private clinics; other PT graduates are reported to work full or part time at spas and massage parlours.

One private clinic visited was owned by a PT and Deputy Head, CMR. This PT clinic offered treatment and massage primarily for neck and low back pain related to sedentary office jobs as well as sports injuries. The majority of the clientele were government health workers. There were clear standards in relation to recruitment and monitoring of quality service; referral protocols to general hospitals for X-ray or medical consultation as needed; and new, functioning equipment in a clean and pleasant environment. This clinic sees 20-30 patients on weekdays; 40-60 patients on each weekend day.

The other private clinic was the third one to open in Vientiane 18 years ago (the other two clinics are no longer operating). This clinic primarily offers massage with some rehabilitation treatment for clients with musculoskeletal problems (neck and low back pain) reportedly from too much sitting, playing golf, or suffering a stroke. Most clients were men between 50-60 years and typically government officials. This clinic was owned by the wife of the former Director of CMR. She is a Medical Doctor with an associate degree gained at the Military Hospital in 1976. The clinic has a staff of 23 who work from 1-8pm daily with around 30-50 clients visiting the clinic daily. Some were trained as PTs at UHS; others are masseurs.

2. Educating the Rehabilitation Workforce

Pre service training

In the current rehabilitation workforce, all medical personnel and PTs received their initial training in medicine or PT at UHS. Prior to the setting up of the UHS (under Ministry of Health) in 2008, medicine was taught at the Faculty of Medicine at the National University of Laos. PT was taught in the College of Health Sciences which also came under the MOH. The first graduates in PT were in 1968 and until 2014 there were 1168 graduates with another 59 due to graduate in August 2015 (see details Dr Bouathep Phoumind, Associate Dean, FMT, UHS in Annex VII). On 2014 figures in Annex VII, the vast majority of PT graduates hold a certificate/diploma from before UHS was formed: n=1069, 91.5%. The remaining 99 (8.5%) hold an Associate Degree achieved either as an upgrade from their certificate or diploma or from a direct entry, 3 year program.

Medical doctors

There is no speciality in rehabilitation medicine in Laos. It appears that the only doctor with rehabilitation speciality is Dr Bouathep Phoumind who is responsible for the PT and P&O programs in FMT at UHS. She completed her speciality training at Khon Kaen University in Thailand some years ago. She also trained learned PT skills from a French expert at Mahosot Hospital during 1991-1994 and received one month training in 1994 at the PT department at Khon Kaen University. She also has had some training in pedagogy which was certified by the Handicap International Country Manager and the rector of CMR (email correspondence with Dr Bouathep, 12th June). Dr Bouathep, it appears, and as noted in the Rehabilitation Situation Analysis Report 2013, is entirely responsible for the PT curricula which have been reviewed and upgraded in recent years.

Some PTs have gone back to UHS and have completed, or are doing their medical training. For example, there is one at CMR (already graduated), one at Mahosot Hospital (currently studying), and another at Friendship Hospital who is now an orthopaedic surgeon. Recently, Dr Singkham from
CMR completed his orthopaedic surgery training at Chiang Mai University, Thailand. It was not possible to establish accurately the number of orthopaedic specialists in Vientiane. It is common to refer to personnel as specialists when they have completed short course training usually by an external consultant or CMR adviser, funded by a development partner. This makes it difficult to determine what qualifications individual staff hold. (See Annex VIII for details of short course training for surgeons over recent years organised via COPE and funded by development partner CBM).

**Physiotherapists (PTs)**

There have been and still are a number of different ways to become a physiotherapist in Laos. Initially in 1968 this was a certificate (sometimes called a Diploma) from the then College of Health Sciences. When UHS began FMT in 2008, an Associate Degree in PT was introduced; this has already been reviewed and revised.

There are two ways to achieve this Associate Degree. The first takes two years and is for existing physiotherapists with at least five years’ experience in an MOH hospital. Graduates receive what is called in Laos a high-level degree, an Associate Degree in Physiotherapy. Some permanent staff from the Vientiane hospitals have achieved this, or are currently studying for this Associate Degree. Mr Bouadeng who is the Head of the PT at FMT is a good example of a person who first qualified in 1977 with a Certificate in PT and later achieved his Associate Degree in 2014. Mr Bouadeng has been teaching students in the Associate Degree program although he did not hold a PT qualification at this level until 2014. It appears however that he is not allowed to teach on the newly introduced (2014) 4 year baccalaureate program.

The second way to achieve an Associate Degree is through direct entry to FMT and typically from upper secondary school (although there are a few older students) and an entrance examination to undertake a three year program. The first year of this program is foundation physical sciences; the latter two years are taught by FMT staff with some input from doctors and PTs from the hospitals in Vientiane including CMR. The hospital doctors and therapists are paid on a sessional basis by the UHS over and above their government posts. It is reportedly very difficult to get them to come to classes to teach the students because they are busy with their patients. Students from the PT program do their clinical placements at the Vientiane hospitals including CMR. They do not yet go to the provincial hospitals although medical students do; reportedly the provincial doctors are much more motivated to teach students than those in Vientiane. FMT would like to send PT students to provincial hospitals but the lack of a reliable PT service makes this not possible at the moment.

The Bachelor level degree in PT commenced in 2012 under pressure from UHS to offer Bachelor’s, Masters and Doctoral degrees. Dr Bouathep wrote the bacclaureate curriculum. The first year students are about to finish their foundation sciences year. Figures from Dr Bouathep suggest that there are 12 full time staff in FMT teaching the PT course, and another 11 teaching the P&O Associate Degree (see below). These staff are all paid by UHS. UHS has seven faculties and FMT is one-seventh of this. There are also 7 clinicians from the hospitals that teach sessional hours into the PT courses. Currently there are no hospital clinicians teaching sessional hours in the P&O program. The staffing figures at FMT seem disproportionate to the number of students however it was not possible to independently confirm these figures.

Dr Celia Tan from SingHealth has sought and received in principle support from Singapore International Foundation to support FMT to develop and upgrade its PT curricula. The 3 year SIF – FMT plan (anticipated to start in 2016) is to provide teachers on short term visits from Singapore to teach into the Associate Degree program, and potentially the Bachelor’s program. The other part of
the plan is to select some high performing students (with good English) from the Bachelor’s program to undertake a Master’s degree in another country (whether they will be eligible is yet to be determined). Once they had completed a Master’s degree, these students would be expected to come back and teach the Bachelor program at FMT. The PT program at Khon Khaen in Thailand may be the most appropriate place for these students to study given language familiarity and existing relationships between UHS and Kohn Khaen University.

**Prosthetics and Orthotics (P&O)**

The recently developed 3 year Associate Degree course in Prosthetics and Orthotics began in 2012 and will have its first 8 graduates in August this year. It is not entirely clear who wrote the curriculum, although Dr Bouathep led its introduction. There are two Category 1 P&O’s in Laos: the newly appointed male Head, P&O at CMR (see below) and a female P&O at the Provincial Rehabilitation Centre (PRC) in Champasak, and they may also have been involved. There is a Category 2 P&O (international standard from CPSO) seconded from CMR to FMT to teach this course. Again, doctors provide the teaching in foundation subjects, and Dr Bouathep teaches about rehabilitation on this course.

Because there is an international standard in P&O at 3 levels, and courses are available in the region, and there was no one in Lao PDR with P&O qualifications in P&O, the now Cat 1 P&Os were sponsored to gain their qualifications outside Laos at Cambodian School of Prosthetics and Orthotics (CSPO) and La Trobe University in Australia. This is quite a different situation to PT and OT where there are no international standards at different levels of qualification. Lao PDR therefore started its own courses in PT. This type of beginning makes it harder later to reach international standards not only for new students but also in relation to upgrading the existing workforce. However this is a very common situation and other countries in the region. Thailand for example has successfully attained international standard PT, OT and P&O curricula from an early beginning with locally designed courses in these rehabilitation disciplines. Vietnam similarly is achieving international standard curricula using a variety of support mechanisms including the training of high level nurses as speech pathologists to attain internationally recognised curricula in the health rehabilitation professions.

**Occupational Therapy (OT)**

There is no occupational therapy course in Lao PDR and no occupational therapy profession. As per below, short courses are offered in occupational therapy to PTs at CMR and they are supported by OT advisers that COPE has funded since 2011 (although not every year). There are 6-8 PTs in CMR and another 2 in each of the 4 PRCs called OTs who have been trained in this way. In total around 16 PTs have been trained in these short courses and are now called OTs in Lao PDR. These rehabilitation professionals do not have occupational therapy qualifications that are acceptable to the World Federation of Occupational Therapists. According to key informants, there are no plans at present to commence offering an occupational therapy program at UHS.

**Hospital staff input into Faculty of Medical Technology course in PT**

Senior staff in some of the hospitals are expected to provide teaching input into the University of Health Sciences PT courses. For example, at Mahosot, the PT Department Head provides 3 hours per week teaching to FMT, teaching biomechanics in the PT course. Similarly the CMR P&O Deputy Head, who is a Category 1 with training from CPSO in Cambodia and La Trobe University, teaches approximately 6 hours per week to the P&O students from 2nd year (year 1 is foundation subjects), however this is done in a classroom at CMR. These clinician-teachers receive hourly income for this teaching work paid by FMT, which is approved as part of their regular duties (so they do not do extra
hours per week to cover this teaching). It appears that there are no staff from 103 Military Hospital, Sethathirath or Mittaphab Hospital teaching into the courses at FMT.

STUDENTS ON CLINICAL PLACEMENT IN HOSPITALS

PT and P&O students undertake clinical placement in the hospitals dependent on the course and stage of the course. Year 1 appears to be foundational in both PT and P&O direct entry courses, so clinical placements do not start until second year. In PT, second year placements are only for 2-3 days; in third year, it is a month clinical placement. When students are on placement, the hospital staff are responsible for their clinical supervision. In Mahosot for example, the PT Department Head is responsible for the students and works with them for 3 hours per week, between 8-11am on the ward, and teaches them through case study of patients with different conditions. The rest of the time the students are observing and treating in the outpatients department. All hospitals visited accepted students on placement. The private clinics do not take students.

CONTACT BETWEEN REHABILITATION PERSONNEL AT HOSPITALS AND PRIVATE CLINICS IN VIENGTAINE

Rehabilitation personnel rarely have the opportunity to meet other rehabilitation personnel in Vientiane. Both Mittaphab and Mahosot PTs mentioned that in the past (mid to late 1990s) there were continuing education workshops supported by Handicap International where they could meet each other and exchange ideas, but nothing since then. On the walls of the PT department at Military 103 Hospital there are pictures from 1992-1997 of training by Handicap International. PT staff at that hospital reported that they had not been involved in short course training for a long time.

The recent round of consultations facilitated by CMR about the National Disability Inclusive Health and Rehabilitation Strategy provided the first opportunity in a very long time for staff from Mittaphab Hospital to meet other rehabilitation professionals at CMR. However, rehabilitation professionals from Mahosot were not invited/involved in these consultations, although it is not clear why.

Staff in the Vientiane hospitals (with the exception of CMR) also rarely have the opportunity to meet rehabilitation personnel from other countries, unless they are one of the few who have attended short course training outside Laos. CMR and PRC staff on the other hand meet and work with PT, OT, P&O and Rehabilitation advisers funded by COPE. There are also external rehabilitation staff brought in by COPE for short course training. Students from other countries also visit COPE so there are good opportunities for CMR staff to be exposed to external ideas and knowledge.

This is not the case with the other hospitals in Vientiane (or by extension the provinces and districts). Mittaphab Hospital was the only hospital who had received some PT interns in Rehabilitation and Traditional Medicine some time ago and from whom staff reported learning a lot of new and different techniques.

REGISTRATION AND/ OR PROFESSIONAL NETWORKS AND ASSOCIATIONS

There was no discussion about registration/licensing in any of the focus groups/interviews. This appeared not to be topic of concern to the key informants. The 2013 WHO HRH LPDR Report (pps. 20 – 21) notes that mid-level health workers such as ‘medical assistants, dentist assistants, nurses, midwives, and physiotherapists and other medical technicians must have at least three years of experience in public or private hospitals’ as well as other requirements such as being in good health,
not have ever been professionally disciplined and be of Lao nationality. That report notes that registration and licensing is not monitored so this may explain the lack of attention to this issue by key informants.

The concept of forming a network of PTs to share knowledge, exchange experiences and potentially work towards a professional association appeared interesting to some key informants. To bring such an initiative to fruition would require significant effort and leadership which, with the current isolation of PTs from each other within their own hospitals, and PTs juggling their hospital positions and private clinic work, could be challenging to achieve. The presence of the Singapore International Fund trainers at FMT however would provide the opportunity to begin discussions to work out ways to begin professional networking. Professional associations in Lao PDR are a reasonably new introduction and require application to government to be officially approved. A first step would be a network of PTs working in Vientiane who meet regularly to discuss their PT practice, to share knowledge particularly from those with access to outside sources, and to initiate work on clinical guidelines, clinical care pathways and standards of practice.

CONTINUING OR POST-SERVICE EDUCATION

UPGRADING QUALIFICATIONS

Upgrading qualifications is only offered to permanent staff in the hospitals. A permanent staff member is in an MOH government post. A permanent PT staff member may be selected by their Department Head to undertake the Associate Degree bridging course at FMT. As can be seen from Annex VII Table 5, 26 PTs graduated from this bridging course in 2014 and another 28 are expected to do so in 2015 (August). There is concern by FMT staff that the hospital PT staff who only hold a previous Diploma or Certificate do not necessarily teach good knowledge to students when they are on placement; they teach only their own opinion. This was said to be particularly true of older staff who claim their longer term experience brings greater knowledge and expertise. This according to FMT staff makes it difficult for younger staff who are more recent graduates and typically contract staff or volunteers to use their more up-to-date knowledge.

SHORT COURSE TRAINING

Short course training is only offered to permanent staff in the hospitals. Some rehabilitation professionals have had the opportunity to go on short courses in other countries. The numbers however vary from hospital to hospital and the courses undertaken vary with more at some hospitals (e.g. Mahosot) and none at others (e.g. 103 Military Hospital). It remains unclear exactly how some rehabilitation professionals are able to undertake short course training in other countries. Hospital budget and allocation of training dollars appears to play a part; ability to gain funding from a foundation or donor or INGO seems to be a more significant factor.

For example, both the Head and Deputy Head Rehabilitation and Traditional Medicine at Mittaphab Hospital had taken short courses outside Laos, but few others in that department had done so. The Head who is a medical doctor studied traditional medicine in China and Vietnam three times, with these study visits being of approximately 3 months duration. The Deputy Head who is a PT, spent 3 months in Marseilles, France where he spent one month in the General Hospital and two months in a specialist rehabilitation centre. At Mahosot, as the tertiary hospital specialising in cardiology and neurology, senior PT staff had undertaken several short courses in Thailand including at Mahidol University and Siriraj Hospital focusing on stroke and haemophilia. The PT Department Head in recent years had attended short courses in Thailand in 2004 and 2012, and a two year management
skills development course in Laos. At the 103 Military Hospital and at Sethatirath Hospital, only one from a total of 11 staff mentioned taking a short course, and this was on acupuncture in France.

CMR CONTINUING EDUCATION

CMR and the PRCs are in a different position to the situation at other hospitals in Vientiane with regard to continuing education and short course training.

UPGRADING AND ADDITIONAL QUALIFICATIONS

At CMR, there are a few senior staff with additional qualifications; some of which were gained some years ago. Note however the one recent initiative where Dr Singkham completed a post-graduate qualification in orthopaedic surgery at Chiang Mai University in Thailand. This arose because of concerns identified by CBM about the quality of orthopaedic surgery and through COPE supporting an Orthopaedic advisor located at CMR from 2012 (see details of orthopaedic surgery short course training in Annex VIII).

SHORT COURSE TRAINING

COPE has been responsible for supporting training at CMR (and associated PRCs) for much of its 18 years of existence. This is because COPE while an ‘independent’ NGO\(^7\) is directly associated with CMR and is located on the CMR campus. COPE works side by side with CMR to improve the physical rehabilitation system and staff and help patients access care through CMR in Vientiane capital and the 4 CMR PRCs in Champasak, Luang Prabang, Savannakhet, Vientiane, and Xieng Khouang (COPE Draft Strategy, 2015).

In relation to professional continuing education, COPE focuses on (i) increasing clinical/rehabilitation skills, including P&O, physical therapy and occupational therapy; and, (ii) increasing surgical skills for key medical staff involved in essential treatment of P&O patients.

COPE uses two approaches to achieve these aims. It provides regular short course training and also supports longer term on campus externally recruited P&O (since 1997) PT (since 2007) and OT advisers (since 2011) from other countries. Currently there is a Rehabilitation Adviser. These advisers (previously called mentors) work individually with staff at CMR and the PRCs; they also conduct short course training at the CMR campus for CMR and also sometimes including PRCs, often in collaboration with external experts brought in by COPE. They have also contributed to developing guidelines and clinical pathways documents to be used at CMR. Recent COPE short course activities in P&O, PT and OT are listed in Annex VIII, Table 6.

\(^7\) COPE was formed under a Cooperation Agreement between the Lao Ministry of Health, the Center for Medical Rehabilitation and three INGOs in 1997 (Cambodian School of Prosthetics and Orthotics, POWER International and World Vision).
3. Key Issues of Capacity, Challenges and Opportunities for the Rehabilitation Workforce

1. CAPACITY

HELPING PEOPLE TO BE INDEPENDENT AND PARTICIPATE IN LIFE

At all focus groups key informants cited as the first strength of their work, the opportunity to help people to be more independent/to walk/to stand up and consequently they could participate in life and this was very important. Another way of saying this came from one PT who described his job satisfaction as seeing improvement and giving patients increased quality of life. Some mentioned feeling proud that they could contribute to the country in this way, where there was a social and economic contribution. As another participant noted, “to help people improve their life, go back to their life, to stop them being permanently disabled”.

WORKING AS A TEAM WITHIN THE PT OR REHABILITATION UNIT

In all facilities PTs must receive referrals from doctors; they can suggest to a doctor that a particular patient may benefit from PT, however the doctor has to request and approve PT treatment. The second strength in some PT and rehabilitation units was the collaboration and cooperation among the staff, even with senior staff – ‘we work as a team, as a family’. This was not the case for all units and more apparent in some hospitals than others. In Mittaphab Hospital in particular, staff mentioned being able to be independent and see patients by themselves without having a more senior rehabilitation unit staff member supervising them all the time, and this was seen as a significant strength. At Mittaphab Hospital and at Mahosot Hospital, daily multi-disciplinary case conferences determined treatment decisions and which members of the team would work with the patient, and this was highly regarded.

PT or Rehabilitation Unit staff generally work in teams in the hospital environment; with individual staff members rotating on to different wards or working in OPD. Mittaphab and Mahosot hospitals were the only examples of reasonably strong team work. In contrast multi-disciplinary assessment, treatment planning and review is not reported to be standard practice at CMR, or by extension at the PRCs (which were set up and are maintained by CMR) as noted in the Rehabilitation Situation Analysis Report 2013. For example at CMR as noted by key informants in the focus group and in individual interviews, that following screening by an OPD doctor, each discipline and starting with the medical doctors, does their own assessment and treatment plan. Assessment and treatment plans have a strong disciplinary focus rather than a more jointly focused multi-disciplinary approach to screening, assessment, intervention and treatment planning and monitoring and evaluation.

2. CHALLENGES FOR REHABILITATION WORKFORCE

QUALIFICATIONS OF THE PT WORKFORCE

By far the majority of the qualified PTs in Lao PDR (1069) have graduated with a lower level qualification of Certificate or Diploma from the former College of Health Sciences. Of these 26 had upgraded to an Associate Degree by 2014, with a further 28 expected to reach this level in August 2015. In addition there were 73 graduates from the 3 year Associate Degree program at FMT in 2014 with another 31 expected in August 2015 (details are in Annex VII). Taken together, by August 2015 there will be 151 Associate Degree graduates, which comprise approximately 12% of PT graduates in
Lao PDR. This figure provides a useful insight into the current standing of the PT graduates in Lao PDR. It will be sometime before there will be Bachelor level graduates to complement this very small proportion of Associate Degree graduates.

Of the 1069 PT graduates only 284 are officially (MOH) recognised as comprising the PT workforce. It was not possible to determine what proportion of the current 284 PT workforce has an Associate Degree. This is a real difficulty as key informants reported that many of the more qualified (and better) students sought employment outside of MOH typically in the private clinics where as noted previously they could receive higher salaries and permanent positions.

It was not possible either to determine what percentage of PT graduates with Associate Degrees are working as contractual staff, temporary staff or volunteers; or working in private clinics or spas or massage parlours or not working in PT at all. Clearly there are a great number of Lao PDR PT graduates not working as PTs.

EMPLOYMENT OF FMT GRADUATES

If the FMT figure of 1168 PT graduates in Lao PDR in 2014 (Annex VII) is compared with the 284 MOH PT figure (based on 2012 figures which are the lastest official figures available), then not quite one quarter (24%) of PT graduates are employed in the official rehabilitation workforce. This presents difficulties for at least three reasons.

The first is that poor employment outcomes for graduates are known to influence decisions by prospective students about their choice of degree. As noted in the Rehabilitation Sector Situation Analysis Report Lao PDR April – May 2013 this is a problem in Lao PDR where staff at FMT reported students are reluctant to undertake the PT program when they are unlikely to get a government position after graduation. The second is that graduates are more likely to go to the private clinics and not ever enter the official rehabilitation workforce as reported by senior staff at the Vientiane hospitals. This means that a ‘potential rehabilitation workforce’ capable of serving all Lao PDR citizens including those in rural areas and those who have higher rehabilitation needs (private clinics are not able to treat those with more serious conditions). The third is that even after training, and due to the poor remuneration, graduates are likely to find employment in other sectors and particularly if they have a second language which is highly valued such as Chinese (Mandarin).

With no networks among PTs in Lao PDR, no professional association and government employment as a PT limited to only just over 200 (215) government posts and another 69 contractual posts (284 in total) there is very little information about the size of the actual PT workforce including all private clinics. As well, FMT does not keep data on graduate employment.

LOWER QUALIFICATION LEVEL OF MAJORITY OF PT WORKFORCE

The lower knowledge level of the PT workforce (91.5% with a certificate/ diploma) creates several difficulties. First, many senior people are supervising more junior staff with more up-to-date and higher level knowledge. This means that often the newer knowledge does not get incorporated into rehabilitation practice. There is a level of frustration as noted by some key informants at the undue influence of senior staff. This in combination with the lower salaries for volunteers or temporary staff (the only way to get one’s first position in an MOH hospital) and the long time (five years of more before a contractual staff member can be considered for a permanent position and then only when one is available) means that, as key informants reported, many new graduates may not even consider entering the official rehabilitation workforce.
Second, when continuing education opportunities are made available such as those funded by COPE for CMR and PRC staff, these need to be planned around basic knowledge, given that many staff have not had the opportunity to learn the fundamentals for example in anatomy or neurology. This means that continuing education is rarely focused on increasing knowledge in speciality areas (despite the titles of short courses offered) because most time is taken in reviewing and increasing foundational knowledge. COPE short course training is not yet at the stage of developing more specialist knowledge in the rehabilitation workforce. COPE in its 2015 planning is now considering implementing a different and systematic approach to short course training. This would constitute a continuing education curriculum and plan over the next five years to upgrade basic knowledge in rehabilitation staff at CMR and the PRCs. This is needed to ensure the best opportunity for these staff to then benefit from short course training in speciality areas at a later date.

Third, it is very difficult for Lao PDR PTs and other rehabilitation personnel to gain access to short courses in other countries due to (i) their lower level of clinical and technical knowledge; (ii) lack of another language (e.g. English or French); (iii) no availability of government funds for this purpose; (iv) inconsistent availability of donor funds to sponsor courses outside Lao PDR; and (v) reportedly very slow bureaucratic processes receive permission to travel to other countries such that opportunities made available by donors cannot always be taken up.

Fourth, it is currently not seen as important for Lao PDR PTs to gain formal higher PT qualifications in other countries. Whether they would be eligible for admission to an international standard PT qualification has not yet been tested. The two concerns of key informants is that the lower level of their Lao PDR PT qualification and their lack of language proficiency in a language other than their own would make them ineligible in higher education institutions outside Lao PDR. These concerns could be explored when the Singapore International Fund project commences at FMT. Certainly the possibility of building on the relationship and existing MOU between FMT and Khon Khaen University seems a very appropriate way forward. In Thailand the Physical Therapy Council of Thailand is responsible for all regulatory and licensing of PT programs. The Physical Therapy Association of Thailand is a WCPT member. This association has registered the BSc in Physical Therapy at Khon Khaen University. (see http://ams2.kku.ac.th/thai/).

Few opportunities AVAILABLE FOR UPGRADING QUALIFICATIONS IN LAO PDR OR ELSEWHERE

As the figures in Annex VII Table 5 show a very small proportion (only 5%) of the Certificate/Diploma PTs have been able to upgrade their qualifications to Associate Diploma level. This is because to do so requires support and sponsorship from the hospital in which they are working. If working in a government post or contractual position this is only possible if recommended by their Department Head and when there is a scholarship available. Based on analysis of the figures available it appears that of the current 215 PT workforce (government posts), there are 24 currently in the Associate Degree bridging course, which is 11% of the MOH government post PT workforce. Reasons why it is difficult for Lao PDR PTs to upgrade their qualifications outside Lao PDR were presented in the previous section.

OPPORTUNITIES FOR CONTINUING EDUCATION

At each hospital in Vientiane (with the exception of CMR), the lack of continuing education was very keenly (and unanimously) felt by the staff. Only senior staff had opportunities to travel outside Laos and attend short courses in other countries, primarily Thailand. Thailand is favoured for language similarity, closer location and willingness to accept Lao PDR nationals. Of the 4 hospitals in Vientiane, from the 15 senior staff interviewed, 6 had attended short courses ranging in length from 1-2 weeks
to 3 months, however this was over a period of several decades. As reported in the 2013 WHO HRH LPDR Report, Lao PDR ‘regulates continuing professional education by law, but this has not yet been implemented. It is understood that guidelines are being developed to implement continuing professional education’ (p.12). Right now there appears to be little expectation on the part of key informants (except for those at CMR and by implication at the PRCs) that they would have the opportunity to engage in continuing education. As noted in the focus groups some had done so in the past – nearly twenty years ago – when funded by a donor, but since then only a few senior staff had any short course opportunities. The absence of any opportunities to meet together and consolidate existing practice or learn new practice techniques is quite startling.

Since its inception COPE has focused its attention on this issue for staff at CMR and the PRCs. Other rehabilitation staff in the MOH workforce are not currently included in this. There is definitely a major gap between what is occurring for CMR and PRC rehabilitation staff compared to those employed in other MOH hospitals in Vientiane capital and in the provinces. To extend the COPE supported programs to others in the rehabilitation workforce would require consideration of quite a few factors. As noted in discussion with COPE Program Manager (personal communication, 29th May 2015) there would be costs to doing so although the advantages to other rehabilitation personnel in Lao PDR could be significant. There would be potential per diem and travel and accommodation costs, logistical arrangement costs, need for additional infrastructure including teaching rooms and clinical facilities (for teaching hands-on skills) to accommodate larger numbers of participants in short course training to mention a few. Most importantly however would be the need to gain support from MOH and from CMR and the employing hospitals before planning could commence for such an endeavour, which would be a new sector wide collaborative approach which has not previously been employed in Vientiane.

CLINICAL GUIDELINES AND STANDARDS OF PRACTICE

CLINICAL GUIDELINES

From the focus groups it appears that most hospitals do not have clinical guidelines. Rather key informants reported learning from other staff about the treatments used in the PT department or rehabilitation unit. (This aligns with the comments earlier on the more senior staff instructing more junior staff and the difficulties junior staff have in putting into practice newer knowledge from their training). However in Mittaphab Hospital for example, the staff were given greater autonomy in carrying out their treatments at the same time as having the opportunity to learn from more senior staff, two of whom, the Head and Deputy Head had y recent short course training in two fields and in two countries outside Lao PDR as reported earlier. Staff at this hospital also articulated a systematic approach to new staff induction, with short course training in the PT rooms and the Traditional Medicine rooms as well as induction to their interventions by using case studies. Every Thursday, the staff review their interventions and their practice by presenting case studies.

In other hospitals the situation is quite different. For example at the 103 Military Hospital it appears that learning what to do is to follow the practices employed over a significant period at time, much of which was learnt in the early to mid-1990s with technical input from Handicap International. The wallcharts with clinical guidelines in the form of text and illustrations on stroke (not dated) appear to be from the training offered there in 1992-1997. With no access to any continuing education since that period the only way that updated techniques could be learnt and applied are if these are introduced by staff who are currently studying the Associate Degree Bridging Course (of which there are two) assuming there are more up-to-date techniques taught within that program.
In contrast, and with funding from COPE, there has been quite a lot of activity at CMR and the PRCs in recent years to introduce clinical guidelines. This has included preparing documents on clinical pathways (including guidelines for each phase) for children with cerebral palsy as noted in the Rehabilitation Situation Analysis Report 2013. In 2015, COPE is supporting the P&O department at CMR with the P&O staff in the PRCs to develop Lao PDR National Standards for lower limb prosthetics and orthotics and the prosthetics component is already completed. In 2016, this project will be extended to include upper limb and spinal prosthetics and orthotics.

STANDARDS OF PRACTICE

Standards of practice for physiotherapy are currently absent in Lao PDR. These are typically developed at national level following international guidelines such as those developed by WCPT. There is no network of PTs or a professional association which is frequently where the impetus for developing national or adopting international standards arises. The lack of English also limits use of international websites which offer very helpful guidelines for clinical practice for different conditions; standards of practice; and, multiple other resources in relation to policy, practice and education. See for example WCPT website at http://www.wcpt.org/

Another drawback to developing national standards of practice in rehabilitation is the lack of a clear national focal point for rehabilitation. CMR is in one sense a national facility as it serves people from all over Lao PDR. It also receives referrals from the outreach COPE CONNECT program. This is particularly so for surgery, P&O and post-operative PT. CMR is equivalent to the other hospitals in Vientiane capital, with the Director at the same level as the Director of Mahosot, Mittaphab and Setthi hospitals. CMR primarily operates as a local/provincial hospital for the province of Vientiane capital. It is not nationally designated and therefore it is not able to exert much national influence, although it does provide oversight of the 4 PRCs.

Key informants at CMR noted that it would make a very big difference to their work if CMR had more national influence. Each rehabilitation discipline could then develop clinical guidelines and protocols and work to have these implemented in the PRCs but at the provincial or district hospitals where there are PTs. As noted in Annex VI, Table 3 there are mostly only one or two PTs (who are quite isolated) at provincial or district hospitals under the control of the province.

MANAGEMENT OF QUALITY AND PERFORMANCE

Associated with lack of clinical guidelines and standards of practice is concern about management of quality and performance. Key informants in some focus groups noted there was a very poor link between managers and the staff. This is more marked in some facilities than others. Typically there are no job descriptions (written or verbal) so that it is not clear to either the position incumbent and their manager exactly what are their mutual responsibilities. Without agreed quality and performance standards based on job descriptions it is almost impossible for managers to manage staff. Added to this, in government positions, managers are rewarded based on annual feedback from their staff. It is in their best interests therefore to be viewed as a nice and cooperative person rather than to undertake a quality and performance role.

The knowledge levels of the majority of PT graduates (91.5%) with a certificate/diploma are said to vary significantly. This is attributed to the Lao PDR practice of passing all university graduates no matter how long it may take for them to complete their qualifications and to what level. The FMT staff reported a particular difficulty when students from rural areas with lower levels of high school education enrol. Currently government policy disproportionally supports rural students to undertake health worker qualifications. Despite FMT academic staff (and by report all UHS academic staff)
pointing out the difficulties teaching these students and concerns about their being allowed to pass, this situation continues. This adds to the dilemma of standards both within Lao PDR and when Lao citizens seek further study elsewhere.

Key informants also reported the same lack of attention to quality and performance with regard to materials and equipment. As noted in the Rehabilitation Situation Analysis Report 2013, and again on the hospital visits for this study, a great deal of equipment from plinths to exercise and ultrasound machines was in less than ideal condition or broken and pushed to one side as it was not possible to get repairs done or replacement parts. Lack of regular or poorly conducted maintenance was reported to contribute considerably so that run-down machines were more likely to break and then remain permanently broken.

3. OPPORTUNITIES FOR THE REHABILITATION WORKFORCE

There are good opportunities for increasing the capacity of the Lao PDR rehabilitation workforce over time. As noted earlier other countries in the Mekong region have also faced similar challenges with geographical barriers, lower financial and human resources and lack of capacity in the early phases of developing their rehabilitation workforce.

Internationally there are a suite of resources and regulatory frameworks to assist Lao PDR to move forward to provide disability inclusive health and rehabilitation services. The WHO Global Action Plan Better Health for All 2014-2021 is one example of this. Senior government officials from Lao PDR and members of the Laos Disabled People’s Association have participated in Regional Consultations on this plan and follow up at a Regional Rehabilitation Workshop conducted by WHO Western Pacific Regional Office in November 2013 and June 2014 respectively in Manila. These opportunities were followed by the two day National Rehabilitation Forum in Vientiane in August 2014. The Rehabilitation Sector Situation Analysis Report 2013 provided details of the rehabilitation sector in Lao PDR at that time using the WHO Building Blocks approach to health system analysis. The current study has added more in-depth data and analysis in relation to the rehabilitation workforce. The in principle agreement between UHS and Singapore International Foundation to develop capacity and increase standards for the FMT teaching staff and the Associate Degree Bridging course (and potentially the PT baccalaureate program) augur well for implementing higher quality PT education in Lao PDR over the next five years.

All of these actions have led to more in-depth discussions about the way forward for the rehabilitation sector in Lao PDR. These have been informed by the experiences of the participants in the WHO WPRO regional events – and in the knowledge gained from sharing experiences, challenges and opportunities with key participants from other countries in the region. There is now a Draft National Disability Inclusive Health and Rehabilitation Strategic Action Plan and national consultations on this plan have occurred over the past 8-9 months.

Lao PDR is now regarded as a lower middle income country with a rising GDP. The country is undertaking Health Sector Reform, and rehabilitation and disability have been included in the next draft 5 year health plan. This is a positive step forward. The recommendations provided below are set against this context of increased focus in Lao PDR on the health sector. The quantum of actions that can take place within the five year period depends on resources – both financial and human – that are available. More detailed work will need to be done by the key stakeholders in the rehabilitation sector to develop annual work plans to detail the most appropriate sequencing, quantum and priority of actions for each year over the shorter and long term. A summary of the context underpinning the recommendations is now provided.
SUMMARY OF THE CONTEXT UNDERPINNING THE RECOMMENDATIONS

Figure 1 is an attempt to illustrate the rather complex situation by depth of colour and level of placement for each component on the circle representing the rehabilitation sector.

Overall CMR is regarded as heading up the rehabilitation sector by its positioning on an equal footing with other hospitals in Vientiane. This is evidenced by the MOH through the Division of Health Care requiring Dr Khamphet, as Director of CMR, to develop a national medical rehabilitation plan. It is also evidenced by all discussions about existing rehabilitation programs or new initiatives such as the one under MSLW that have to be conducted with the Ministry of Health being delegated to Dr Khamphet.

However as noted CMRs role as a national leader in rehabilitation is severely under-utilised with little involvement in the rehabilitation services (which are primarily PT) in the provinces or districts. The linkages between CMR and the PRCs however are strengthening with increasingly regular quality and monitoring visits by staff from CMR.

CMR is well-positioned to become a leader in rehabilitation in Lao PDR. Focusing on initiating collaborations, networking and sharing expertise in Vientiane would be a good place to start. Because of its position to receive donor funding for programs and continuing education through COPE, it is in a strong position to do so. It has a critical mass of rehabilitation staff who have had access to short courses and mentorship, all of which has not been available to the other hospitals.

![Figure 1 Context of rehabilitation workforce sector in Lao PDR](image)

The linkages between CMR and the other hospitals in the Vientiane capital are currently remarkably under-developed. (This is often put down to staff at the other hospitals not knowing about what rehabilitation is and what CMR has to offer). There is very little interaction between rehabilitation staff at CMR and those at the other hospitals. This means that there is little understanding of each other’s position and capacity. In particular at Mittaphab Hospital there was quite a lot of discussion.
about blockages for referral and transfer of patients between the national referral trauma unit at Mittaphab and CMR. These blockages were seen as the result of unwillingness of CMR to take more serious rehabilitation cases. On the other hand CMR rehabilitation staff are not well equipped for more serious cases. It was noted that sometimes these more serious patients were admitted to CMR but discharged quite quickly because staff felt there was little they could do to improve their situation. There appeared to be no referral guidelines or criteria for decision making in relation to these issues which exacerbated the difficulties in relationships between the hospitals. There is an opportunity here to change this situation.

Also as noted there had been no opportunity for staff from the other hospitals to be involved in ongoing consultations about the Draft National Disability Inclusive Health and Rehabilitation Strategy 2016-2020 except for some staff Mittaphab Hospital. There have not been any opportunities for staff from the other Vientiane hospitals to be involved in short course training that has been occurring for CMR staff over a considerable period of time. Overall the situation could be summed up as quite isolationist with CMR operating quite separately (and having access to quite different resources in the form of infrastructure, personnel and training coming through COPE from donor funds). This isolationist approach between CMR and the other hospitals is one of the challenges which also offers an opportunity for improvement, for networking and for bringing together management and senior and more junior staff to increase the capacity of the rehabilitation sector within Vientiane. Building on the resulting greater critical mass with increased capacity in Vientiane, actions can then be taken to extend the same processes and expand capacity building actions to include the provinces over the mid to longer term.
LONG TERM GOAL TO INCREASE CAPACITY OF REHABILITATION WORKFORCE IN LAO PDR

By 2030 to achieve a sustainable rehabilitation workforce trained to international standards serving urban and rural communities to increase social participation and economic productivity of the Lao PDR population.

Sustainable means new entrants to workforce are sufficient to meet population needs and turnover due to retirement or resignation from the official government workforce.

Trained to international standards means the majority of rehabilitation workforce trained to foundation level international qualification in each rehabilitation discipline. A smaller proportion of the rehabilitation workforce would be trained at higher levels by further study e.g., master degree or short course in speciality area (at least 3 months duration).

Serving urban and rural population means:

- Fully functioning specialized rehabilitation centre – Centre for Medical Rehabilitation in Vientiane Capital
- Fully functioning rehabilitation units in tertiary referral hospitals in Vientiane with specialisations relevant to the hospital speciality as a national referral centre. For example, trauma and cancer at Mittaphab Hospital, and cardiology and neurology at Mahosot
- Fully functioning rehabilitation units in provincial centres (PRCs) aligned with CMR and supporting the PT units in provincial and district hospitals
- Fully functioning outreach to rural populations beyond the easy reach of provincial and district hospitals with community based rehabilitation (CBR), mobile clinics, and screening and assessment services such as COPE CONNECT
PRIORITIES TO ACHIEVE THE LONG TERM GOAL

Priority 1. CMR and Vientiane hospitals and FMT to work together to build capacity in existing rehabilitation workforce in Vientiane

Overall Outcome: Critical mass of higher capacity rehabilitation workforce in Vientiane

Rationale: Greater proportion of rehabilitation staff in Vientiane (e.g., PTs 138 compared to 77 rural) so potential for greater impact and effect more quickly from specific actions

1.1 Specific outcomes

- Shared knowledge, expertise and patient care within and across hospitals in Vientiane
- Referral pathways and objective criteria for accepting or refusing referrals between hospitals and CMR
- Standard protocols for:
  - patient care within and across hospitals in Vientiane for high incidence conditions in the first instance
  - teaching students within and across hospitals in Vientiane
  - student supervision within and across hospitals in Vientiane
- Continuing education needs identified for all rehabilitation staff in Vientiane
- Systematic schedule of training workshops implemented to update ALL Vientiane rehabilitation workforce together (regardless of employing hospital) according to identified needs
- Specialised training workshops for selected staff in specialist areas
- Selected urban high performing PTs with OT short course training supported to undertake international standard baccalaureate program in occupational therapy in neighbouring country (possibly Thailand)
- Government and/or donor funding to increase numbers of PT certificate/diploma graduates studying bridging course
- Sustainable network of rehabilitation professionals in Vientiane sharing knowledge, expertise and developing clinical pathways and standards of care

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8 High incidence conditions currently seen in rehabilitation appear to be adult stroke, CPD, mobility limitation (amputee, paralysis), spinal cord injury, traumatic brain injury; and for children, congenital conditions, cerebral palsy, birth defects.
Priority 2. Critical mass of higher capacity rehabilitation workforce in Vientiane is responsible for building capacity in existing provincial rehabilitation workforce

Overall Outcome: Increased capacity in rehabilitation workforce in provinces

Rationale: Utilising greater mass of Vientiane based higher capacity workforce will have greater impact and effect more quickly on smaller rural rehabilitation workforce

2.1 Specific outcomes

- Rehabilitation workforce in provinces sharing knowledge, expertise and patient care with Vientiane rehabilitation workforce and with each other
- Standard national protocols
  - for patient care
  - for teaching students
  - for student supervision
- Continuing education needs identified for all rehabilitation staff in provinces
- Systematic schedule of training workshops to update ALL provincial rehabilitation workforce together (regardless of employing hospital) according to identified needs
- Selected high performing rural PTs with OT short course training supported to undertake international standard baccalaureate program in occupational therapy in neighbouring country (possibly Thailand)
- Sustainable network of provincial rehabilitation professionals with shared knowledge, expertise and patient care working collaboratively with Vientiane network to develop professional association in rehabilitation in Lao PDR

Priority 3. Build competent new rehabilitation workforce

Overall Outcome: Increased competence and quality in rehabilitation workforce in Lao PDR

Rationale: Building new and higher quality workforce can be achieved simultaneously and can assist in increasing capacity in less qualified existing workforce

3.1 Specific outcomes

- Entry level Bachelor course in PT is high quality qualification and aims to achieve international standard within 10 years supported initially Vientiane rehabilitation network and later a Lao PT Association which is eligible to become a member of WCPT
- FMT teaching staff are an integral part of network of international teachers in rehabilitation curricula and regularly update their knowledge and teaching expertise
- FMT teaching staff are skilled in using open access programs, policies, clinical guidelines and teaching resources from the internet to inform their teaching
- FMT teaching staff are high quality teachers delivering curricula of international standard
- Bachelor level students receive highest quality clinical training in both urban and rural hospitals and in community based services including CBR, mobile clinics and outreach screening and assessment services such as COPE CONNECT
RECOMMENDATIONS

CONTINUING EDUCATION AND UPGRADING QUALIFICATIONS OF EXISTING WORKFORCE

RECOMMENDATION 1
Develop and implement 5 year continuing education strategy for all Vientiane hospital rehabilitation staff including CMR to undertake short course training together and expand this later to provincial and district hospitals

- Planned, sequenced curriculum of annual continuing education activities in Laos for next five years
  - Basic level courses in foundational skills such as anatomy, physiology and neurology where skills and technical knowledge are missing
  - Higher level training in specialist areas building on the newly developed foundational skills and knowledge by bringing in experts from neighbouring countries

- English (or French) language as essential requirement for Laos health professionals
  - to be eligible for international level short courses abroad
  - to participate in global networks of health professionals
  - to utilise available open access resources and develop evidence based practice

- Planned, sequenced curriculum of continuing education short courses outside Laos for next five years
  - Higher level in specialist areas for those PTs and P&Os who successfully complete the basic level courses in foundational skills as per the first point above and who meet language requirements that permit their benefitting from course taught in a language other than Lao.

RECOMMENDATION 2
Develop and implement schedule for systematic upgrading of qualifications to Associate Degree for PTs in Vientiane

- Planned, sequenced schedule of completion of PT Associate Degree Bridging Course so that an increasing percentage of Vientiane capital PTs have this qualification. At least 20-30% in five years, and approximating 50%-60% in 10 years

RECOMMENDATION 3
Select high performing PTs at CMR who have already completed short course OT training to undertake international standard baccalaureate occupational therapy program in neighbouring country
- Plan to bring occupational therapy discipline to Lao PDR at international standard
- Occupational therapy graduates on return to Vientiane to contribute to planning and implementation of occupational therapy program at FMT
PROFESSIONAL NETWORK, MENTORING AND DEVELOPING STANDARDS OF PRACTICE

RECOMMENDATION 4
Identify, support and utilise a cadre of more expert PTs and P&Os in Vientiane as leaders and role models create a rehabilitation network to develop national standards of practice and clinical guidelines

- Through this network systematically mentor the next generation of identified leaders in their respective disciplines
- Work with and alongside outside experts brought in to teach continuing education short courses to ensure appropriate adaptations as needed to Lao social and economic and health sector context
- Work together and utilise international resources to develop national standards of practice and clinical guidelines

RECOMMENDATION 5
Utilise this cadre of more expert PTs and P&Os to provide a systematic schedule of training and mentoring to PTs in provincial and district hospitals and PTs and P&Os in PRCs

- Provincial staff come to continuing education workshops in capital
- Rehabilitation staff from Vientiane capital to provide training workshops in provinces
- Rehabilitation staff mentor and monitor quality control for rehabilitation staff in provinces

RECOMMENDATION 6
Develop and implement strategy for succession planning and mentoring for rehabilitation personnel in CMR, the hospitals in Vientiane and the PRC’s

- Identify next generation leaders in each Vientiane hospital and PRC
- Provide specific activities/ opportunities and projects for next generation of rehabilitation staff to become heads of department and professional leaders

UPGRADING QUALIFICATIONS FOR STUDENTS IN TRAINING AND STAFF AT FMT

RECOMMENDATION 7
Prioritise the entry level courses PT and P&O programs at FMT to build a new, competent rehabilitation workforce by ensuring allocation of the best and most highly qualified teachers and the highest possible standard of clinical placements for students in these programs

- Allocate resources to ensure entry level curricula are not second best to bridging courses or other actions to upgrade the existing rehabilitation workforce
- Require FMT staff to undertake language study so that they are competent in English (or French) and can then access higher level educational programs in neighbouring countries
- Ensure that Bachelor level students in PT are placed with the best hospitals (and private clinics) with clinical staff who have developed skills in student supervision (see above) to ensure they are able to maximise their clinical learning experiences
RECOMMENDATION 8
Identify and seek funding to support high achieving students with good English (or French) language proficiency in the baccalaureate PT program (at least 5, more if possible) and P&O Associate Degree program (at least 3, more if possible) to complete their baccalaureate qualifications to international standard in a neighbouring country or countries.

RECOMMENDATION 9
Develop and implement structured professional and academic development plan and succession planning to ensure a next generation of academic leaders at FMT

- Develop systematic plan to upgrade the qualifications of the teaching staff at FMT to ensure they are qualified to teach on the PT Bachelor’s program

- Select at least 2 FMT high performing staff with PT qualifications to undertaken international standard baccalaureate program in occupational therapy program in neighbouring country (possibly Thailand) and on their return to work with the three occupational therapy clinicians (as above) to begin planning for occupational therapy program at FMT to international standard

- Require FMT staff to engage actively with rehabilitation professionals in other countries through the internet to ensure they are abreast of technical, educational and clinical developments in their rehabilitation discipline

- Require FMT staff to utilise already existing curriculum materials and teaching resources from other countries from WCPT at http://www.wcpt.org/about and ISPO at http://www.ispoint.org/

- Identify new generation of academic staff in PT and P&O to receive systematic mentoring and continuing education opportunities

- Provide opportunities for this next generation to get educational qualifications in addition to higher qualifications in their own discipline (see above) so that they can be excellent teachers
ANNEX I: LIST OF DOCUMENTS ACCESSED FOR THE REPORT


COPE Draft Strategic Plan 2015-2017 (personal communication with Stephanie Sparks, CEO Program Manager).


ANNEX II: REHABILITATION MAPPING TEMPLATES

INITIAL

Information at summary level per profession/job title, e.g. rehabilitation specialist, physical therapist, prosthetist and orthotists, occupational therapist

- Total with job title by profession
- Number
- Average age
- Age 55 and over %
- Women %
- Geographical Distribution
- Average weekly hours worked

Information at professional/job title level: Overall number

Next level number (percentage) details of Number with ...... job title* in country

*means with that job title only (note details show whether qualified or not)

- In ..... labour force* in country (public and private)
- International accepted qualifications
- Qualifications not accepted by MOH
- Not in ..... workforce in country

Next level number (percentage) details of Not in ..... workforce* in country

- Employed elsewhere and not looking for work in ..... 
- Not employed and not looking for work in ..... 
- Retired from work 
- Working overseas

Next level number (percentage) details of In ..... workforce in country (public and private)

- Currently employed in ....
- On extended leave....
- Looking for work in ....

Next level number (percentage) details of Currently employed in ....

- Clinician
- Administrator
- Teacher/educator
- Researcher
- Other

*labour force means those with recognised qualifications who are in or looking for working in .......;
There are always a group who are not currently in the ....... workforce for various reasons out of those potentially available. Important to know about this group who may come into .... workforce with suitable incentives
Revised and used for Rehabilitation Mapping Template

Name of Rehabilitation Unit: .................................................................................................................................................

Location of Rehabilitation Unit: ...............................................................................................................................................

Form completed by (name): .........................................................................................................................................................

Position title: ..............................................................................................................................................................................

Date: .........................................................................................................................................................................................

Source of information (e.g. administrative records, asking people, memory): .................................................................

Rehabilitation Personnel

Q1. Number of Doctors

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<th>Orthopaedic surgeon</th>
<th>Physical medicine doctor</th>
<th>Rehabilitation medicine doctor</th>
<th>Traumatologist</th>
<th>Other (please name)</th>
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</thead>
<tbody>
<tr>
<td>Number</td>
<td>M= F=</td>
<td>M= F=</td>
<td>M= F=</td>
<td>M= F=</td>
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<td>M= F=</td>
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Q2. Number of allied health personnel

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<tr>
<th>Title</th>
<th>Physiotherapist</th>
<th>PT assistant</th>
<th>Occupational Therapist</th>
<th>OT assistant</th>
<th>Rehabilitation assistant</th>
<th>Other (please name)</th>
<th>Total number of allied health personnel</th>
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</thead>
<tbody>
<tr>
<td>Number</td>
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<td>M= F=</td>
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Q3. Prosthetics and Orthotics personnel

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<th>P &amp; O Cat 2</th>
<th>P &amp; O Cat 3</th>
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<tbody>
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<td>M= F=</td>
<td>M= F=</td>
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</table>
Rehabilitation Personnel working clinically with patients or in administration

Q4. All rehabilitation personnel *working clinically with patients*

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<th>Physiotherapist</th>
<th>Occupational Therapist</th>
<th>P &amp; O</th>
<th>Other (please name)</th>
<th>Total number of rehabilitation personnel working clinically with patients</th>
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<tr>
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Q5. All rehabilitation personnel *working in administration*

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ANNEX III: PARTICIPANT INFORMATION SHEET AND PARTICIPANT CONSENT FORM

ABN 15 211 513 464

**Professor Gwynnyth Llewellyn**
**Professor, Family and Disability Studies**
**Director, Centre for Disability Research and Policy**
**Head, WHO Collaborating Centre in Health Workforce Development in Rehabilitation and Long Term Care**

Developing a Rehabilitation Workforce in Lao PDR

**PARTICIPANT INFORMATION STATEMENT**
Rehabilitation Personnel

(1) What is this study about?

You are invited to take part in a research study about developing the rehabilitation workforce in Lao PDR. The research aims to identify the situation of the rehabilitation workforce including current capacities and challenges, from multiple perspectives, for example government, INGOs, educational institutions and their graduates, in order to develop a strategic plan for the next two decades to build the Lao PDR rehabilitation workforce capacity to effectively and efficiently meet the needs of people with disabilities.

You have been invited to participate in this study as part of the trained rehabilitation workforce in the health sector. This Participant Information Statement tells you about the research study. Knowing what is involved will help you decide if you want to take part in the study. Please read this sheet carefully and ask questions about anything that you do not understand or want to know more about.
Participation in this research study is voluntary. So it is up to you whether you wish to take part or not.

By giving consent to take part in this study you are telling us that you:
✓ Understand what you have read
✓ Agree to take part in the research study as outlined below
✓ Agree to the use of your personal information as described.

You will be given a copy of this Participant Information Statement to keep.

(2) Who is conducting this study?

The study is being carried out by the following researcher:
Professor Gwynnyth Llewellyn, Head, WHO Collaborating Centre in Healthy Workforce Development in Rehabilitation and Long Term Care, University of Sydney, Australia

This study is supported by World Health Organisation, Regional Office for the Western Pacific, Manila, Philippines.

(3) What will the study involve for me?

You will be asked to participate in an interview or small focus group. The questions will be about the current rehabilitation workforce, capacity and challenges, about the training courses available, and about the likely demand for a rehabilitation workforce in the short, medium and longer term in Lao PDR.

The interview/focus group will be conducted by Professor Llewellyn at a time and place that is convenient to you. Mr Phonesavanh Keomanyson, Technical Officer Non-Communicable Diseases, WHO Country Office, Lao PDR may also be present.

(4) How much of my time will the study take?

The interview is expected to take about 60 minutes to one and half hours.

(5) Do I have to be in the study? Can I withdraw from the study once I have started?

Being in this study is completely voluntary and you do not have to take part. Your decision whether to participate will not affect your current or future relationship with the researcher or anyone else at the University of Sydney or WHO Country Office in Lao PDR.

If you decide to take part in the study and then change your mind later, you are free to withdraw at any time. You can do this by informing Professor Llewellyn at the time of the interview/ focus group, or contact either Professor Llewellyn or Mr Phonesavanh at any time before or after the interview/focus group. If you choose to withdraw it will not affect your current or future relationship with the researcher or anyone else at the University of Sydney or WHO Country Office in Lao PDR.
You are free to stop the interview/focus group at any time. Unless you say that you want us to keep the information that you have already provided, this information will not be included in the study results. If you take part in a focus group and wish to withdraw, as this is a group discussion it will not be possible to exclude individual data once the session has commenced. You may also refuse to answer any questions that you do not wish to answer during the interview/focus group.

(6) Are there any risks or costs associated with being in the study?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

(7) Are there any benefits associated with being in the study?

There are no direct benefits to you as an individual from being in the study.

(8) What will happen to information about me that is collected during the study?

By providing your consent, you are agreeing to us collecting personal information which will include your name, position and title for the purposes of this research study. This research data will be stored in an online data archive that may be accessible in the future by other research projects.

(9) Can I tell other people about the study?

Yes, you are welcome to tell other people about the study.

(10) What if I would like further information about the study?

When you have read this information, Professor Llewellyn or Ms Pauline Kleinitz will be available to discuss it with you further and answer any questions you may have. If you would like to know more at any stage during the study, please feel free to contact:

Professor Gwynnyth Llewellyn, Head, WHO Collaborating Centre in Healthy Workforce Development in Rehabilitation and Long Term Care, University of Sydney, Australia
Ph: +61 2 93519533 email: gwynnyth.llewellyn@sydney.edu.au

OR
Ms Pauline Kleinitz, Technical Lead, Disability and Rehabilitation Unit, Division of NCD and Health through Life Course, World Health Organization, Regional Office for the Western Pacific, Manila, Philippines
Ph: +63 2 5289865 email: kleinitzp@wpro.who.int

(11) Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. You can tell us that you wish to receive feedback by ticking the relevant box on the consent form. This feedback will be in the form of a one page lay summary. You will receive this feedback after the study is finished.

(12) What if I have a complaint or any concerns about the study?
Research involving humans in Australia is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this study have been approved by the HREC of the University of Sydney [INSERT protocol number once approval is obtained]. As part of this process, we have agreed to carry out the study according to the National Statement on Ethical Conduct in Human Research (2007). This statement has been developed to protect people who agree to take part in research studies.

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the university using the details outlined below. Please quote the study title and protocol number.

The Manager, Ethics Administration, University of Sydney:

- Telephone: +61 2 8627 8176
- Email: ro.humanethics@sydney.edu.au
- Fax: +61 2 8627 8177 (Facsimile)

OR

Mr Phone Keomanysone, NonCommunicable Diseases WHO Country Office, Vientiane, Lao PDR

- Telephone: +85621413431
- Email: wr-lao@lao.wpro.who.int
- Fax: +856 21 413 432

This information sheet is for you to keep
Developing a Rehabilitation Workforce in Lao PDR

PARTICIPANT CONSENT FORM

Rehabilitation Personnel

I, ................................................................................... [PRINT NAME], agree to take part in this research study.

In giving my consent I state that:

✓ I understand the purpose of the study, what I will be asked to do, and any risks/benefits involved.

✓ I have read the Participant Information Statement and have been able to discuss my involvement in the study with the researchers if I wished to do so.

✓ The researchers have answered any questions that I had about the study and I am happy with the answers.

✓ I understand that being in this study is completely voluntary and I do not have to take part. My decision whether to be in the study will not affect my relationship with the researchers or anyone else at the University of Sydney now or in the future.

✓ I understand that I can withdraw from the study at any time. If I take part in a focus group and wish to withdraw, as this is a ground discussion it will not be possible to exclude individual data once the session has commenced.

✓ If I take part in an interview, I understand that I may stop the interview at any time if I do not wish to continue, and that unless I indicate otherwise any written notes will then be destroyed and the information provided will not be included in the study. I also understand that I may refuse to answer any questions I do not wish to answer.
✓ I understand that personal information about me that is collected over the course of this project will be stored securely and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.

✓ I understand that the results of this study may be published, but these publications will not contain my name or any identifiable information about me

I consent to:

Permanent archiving of study materials YES ☐ NO ☐

Would you like to receive feedback about the overall results of this study?

YES ☐ NO ☐

If you answered YES, please indicate your preferred form of feedback and address:

☐ Postal: ________________________________

................................................................

☐ Email: ________________________________

................................................................

............................................................

Signature

............................................................

PRINT name

............................................................

Date ...........................................................
ANNEX IV: KEY INFORMANTS

The focus groups and interviews were conducted by Prof Gwynnyth Llewellyn supported as follows:

*Monday 25\textsuperscript{th} and Tuesday 26\textsuperscript{th} May*, supported by Phone Keomaysone, Technical Officer, NCD, WHO Country Office and Mr Phetsaphone Bounyanite, Rehabilitation Education Manager, Handicap International Country Office, and Dr Singkham, Orthopaedic Surgery, CMR

*Wednesday 27\textsuperscript{th}, Thursday 28\textsuperscript{th} and Friday 29\textsuperscript{th} May* supported by Mr Phetsaphone Bounyanite, Rehabilitation Education Manager, Handicap International Country Office, and Dr Singkham Phoumiphak, Orthopaedic Surgery, CMR

*Monday 2\textsuperscript{nd} June* supported by Mr Phetsaphone Bounyanite, Rehabilitation Education Manager, Handicap International Country Office

Key Informants

Table 1 Key informants at Vientiane hospitals

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<tr>
<th>Facility type</th>
<th>Name</th>
<th>Female</th>
<th>Male</th>
<th>Total participants</th>
<th>Number of PT participants</th>
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<td>CMR – Heads of Specialist Units</td>
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<td>8</td>
<td>4</td>
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<tr>
<td></td>
<td>CMR – Executive</td>
<td>-</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Tertiary Referral Hospital with specialist Trauma Unit</td>
<td>Mittaphab (Friendship Hospital)</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Tertiary Referral Hospital with specialist Cardiac and Neurology Units</td>
<td>Mahosot Hospital</td>
<td>4</td>
<td>-</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
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<td>---</td>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>General Hospital</td>
<td>103 Military Hospital</td>
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<tr>
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<td>Sethathirath Hospital</td>
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<td>-</td>
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<td>-</td>
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<td>1</td>
</tr>
<tr>
<td>Private clinic</td>
<td>Massage and Therapeutic Clinic</td>
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<td>-</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Vocational rehabilitation centre</td>
<td>Sikerth Vocational Rehabilitation Centre</td>
<td>3</td>
<td>1</td>
<td>4</td>
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</tr>
<tr>
<td>Facility type</td>
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<td>Male</td>
<td>Total participants</td>
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<td>-----------------------------------------------------------</td>
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<td>------</td>
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<tr>
<td>NGO</td>
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<tr>
<td></td>
<td>Faculty of Medical Technology</td>
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<td>2</td>
<td>3</td>
<td></td>
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<tr>
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<td>Deputy Director, Department of Health Care</td>
<td>-</td>
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<td></td>
</tr>
<tr>
<td>WHO Country Office</td>
<td>WHO representative</td>
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<td>-</td>
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</tr>
<tr>
<td>Ministry of Labour and Social Welfare</td>
<td>Director-General, Department of Pension, Invalid and Disability (DPID)</td>
<td>-</td>
<td>1</td>
<td>1</td>
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<td><strong>Total</strong></td>
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<td>4</td>
<td>9</td>
<td>13</td>
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</tr>
</tbody>
</table>
Focus groups and interviews by facility, date, and key informant details

*Centre for Medical Rehabilitation, Monday 25th May am*

Dr Singkham Phoumiphak, Orthopaedic Surgeon, Orthopaedic Surgery Division

Ms Thongkham Chanthiavisay, PT, Neurology Rehabilitation Department, Diploma PT, FMT

Dr Kesone Sisongkham, Head, Neurology Adults, MD University of Medical Science, 4 month short course Mahidol University, Thailand

Somphone Phathep, PT, Deputy Head, Neurology Adults, Diploma PT, FMT and OT from COPE OT

Sybounhenang Sansathit, Deputy Head, Prosthetics and Orthotics, CSPO Cambodia and La Trobe University Bachelor level Prosthetics and Orthotics, Category 1 P&O

Phet Sany Vannapha, PT, Deputy Head, Musculo-skeletal (MSK), Diploma PT, FMT

Dr Thong Phettisavand, Orthopaedic Surgeon, Head, Orthopaedic Surgery Division, Medical Doctor Degree from National University of Laos, Faculty of Medical Science (prior to new UHS), one year Orthopaedic Surgery speciality at University of Synakarne, Khon Kaen, Thailand

Dr Sengpitavong Senghanh, Medical Doctor and PT, Head Musculo-skeletal (MSK), Diploma PT, FMT then Medical Doctor Degree from National University of Laos, Faculty of Medical Science (prior to new UHS)

*Monday 25th May, pm*

Sybounhenang Sansathit, Deputy Head, Prosthetics and Orthotics, CMR, CSPO Cambodia and La Trobe University Bachelor level Prosthetics and Orthotics, Category 1 P&O

*Mittaphab (Friendship) Hospital, Tuesday 26th May am*

Dr Phouthone Muongpak, Director, Anaesthesiologist  Interview with Dr Sonenaly and Mr Phouvong present and then focus group as below

Dr Sonenaly Khantharod, Medical Doctor, Head, Rehabilitation and Traditional Medicine Unit, Medical Doctor Degree from University of Health Sciences, 3 short courses 3 months each on Traditional Medicine, Beijing (2) and Kuoming

Mr Phouvong Keohavong, PT, Deputy Head, Rehabilitation and Traditional Medicine Unit, Diploma PT, FMT and 3 months short course in France, 1 month General Hospital, 2 months Specialist Rehabilitation Centre

Mr Soulilath Nouanesengsy, PT, Diploma PT, FMT
Pho Sy, PT, Diploma PT, FMT

Mr Phonphenwongsa, PT, Diploma FMT and 2 weeks short course in HoChiMinh Rehabilitation Centre

Mr Onsay Sengvixay, PT, Diploma FMT

**Mahosot Hospital, Tuesday 25th May pm**

Mrs Inkhien Phetphelamoh, PT, Head, Physiotherapy Department, Associate Diploma PT, FMT, and various short courses since 2004 in Thailand including 2 years management skills training in Vientiane

Ms Vatsana Loungkanya, PT, Associate Diploma PT, FMT and short courses in Khoen Khaen, 1991 and Mahidol, 2010

Miss Keomany Sypaseuth, PT, Associate Diploma PT, FMT and short courses in Thailand, Khon Khaen 1991, and Mahidol and Siriraj Hospital, 2012

Miss Tanegon Phimsoda, PT, Diploma PT, FMT

**103 Military Hospital, Wednesday 27th May am**

Ms Kay Sonesoucananna Kheangkeo, PT, Head, Rehabilitation Department, Associate Degree PT, FMT, 2014

Vatsana, PT, Diploma PT, FMT

Mr Bounxou, PT, Diploma PT, FMT

Miss Chantha, PT, Diploma PT, FMT

Miss Soundachan, PT, Diploma PT, FMT

Miss Phetsamay Oulayphone, PT, Diploma PT, FMT, studying Associate Degree to graduate 2015

**COPE, Wednesday 27th pm**

Ms Boulanh Phayboun, Director, COPE

Ms Stephanie Sparks, COPE Program Manager

Mr Sengthong Soukhathammavong, Program Coordinator, COPE CONNECT

Mr Venkay, Rehabilitation Adviser, COPE

Mr Kim, P & O Adviser, COPE
Sethatirath Hospital, Wednesday 27th May pm

Mrs Oulay Phonepaxaysone, PT, Acting Head, Rehabilitation Unit, Diploma PT, FMT upgraded to Associate Degree, 2014

Mrs Timchai, PT, Diploma PT, FMT

Ms Phonevanh, PT, Diploma PT, FMT

Mrs Vilada, PT, Diploma PT, FMT

Miss Phaisone Keoudone, PT, Diploma PT, FMT

University of Health Sciences, Thursday 28th am

Dr Phouthone Vangkonevilay, Vice President, University of Health Sciences

Dr Kettesone Phrasisombath, MD, MPH, PhD, Chief of Academic Affairs Division, University of Health Sciences

Faculty of Medical Technology, University of Health Sciences, Thursday 28th am

Associate Professor Dr Bouathep Phoumindr, Medical Doctor

Mr Khampong Phommasone, Head, Prosthetics and Orthotics Program

Mr Bouadong Singvongxay, Head, Physical Therapy Program

Ministry of Health, Thursday 28th pm

Dr Bounack, Deputy Director, Health Care, Ministry of Health

1st Private Clinic, Physical Therapy Clinic, Thursday 28th pm

Mrs PhetSany Vannapha, PT and PT, Deputy Head, Musculo-skeletal (MSK), Diploma PT, FMT

2nd Private Clinic, Massage and Therapeutic Clinic, Thursday 28th pm

Mrs Thongchan, wife of former Director of CMR
Sikerth Vocational Rehabilitation Centre, Friday 29th am
Mrs Senggnoth Keomayphith, Director, Psychology Degree, National University of Laos
Mr Thavone Padith, Vice-Director, Electronic Engineer from Papasak Technical College
Ms Kesoudome Chanthavong, Vice-Director, Tailor from Vientiane Province Technical College
Mrs Doungchai Sayavong, Teacher of Computer, Business Administration and English, Qualifications from Vocational School for the Disabled, Bangkok

WHO Country Office, Friday 29th pm
Ms Juliet Fleischl, WHO representative, Lao People’s Democratic Republic

CMR Executive, Friday 29th pm
Dr Khamphet Manviong, Director, CMR
Dr Thong Lit, Deputy Director, CMR
Dr Pison, Deputy Director, CMR
Dr Singkham, Orthopaedic Surgeon, Orthopaedic Surgery Division, CMR

Ministry of Labour and Social Welfare, Monday 2nd June am
Mr Bounpone Sayasenh, Director-General, Department of Pension, Invalid and Disability (D PID), Head Secretariat National Committee for Disabled People and Elderly (NCDE), Ministry of Labour and Social Welfare

Laos-Australia Development Learning Facility, Monday 1st June, am
Liz Clarke, Research Manager, Laos-Australia Development Learning Facility
Latsany Phakdisoth, Research Officer, Laos-Australia Development Learning Facility
Briefing on rehabilitation and community based rehabilitation work in Lao PDR and the development of the National Disability Inclusive Health and Rehabilitation Strategy and Action Plan
CMR, Monday 1st June, pm

Meeting at CMR chaired by Dr Khamphet on further development of the National Disability Inclusive Health and Rehabilitation Strategy and Action Plan

Laurence Degreef, Technical Adviser, Handicap International

Bernard Franck, Technical Director, TEAM Laos Project, World Education

Anne Rouve Khiev, Handicap International, Country Director

Stephanie Sparks, COPE Program Manager

Patrick Somxaysana Vilayleck, Head, project Office, International Committee of the Red Cross

Dr Thong Lit, Deputy Director, CMR

Dr Khamko, Deputy Director, CMR

University of Health Sciences, Monday 1st June, pm

Professor Vanphanom Sychareun, Dean, Faculty of Postgraduate Studies, University of Health Sciences
ANNEX V: FOCUS GROUP/ INTERVIEW SCHEDULE

Interview/ Focus Group Schedule

Personnel in the rehabilitation workforce

- Who is in the rehabilitation health workforce in LaoPDR?
  Probe as needed:
  o Physiatrists (rehabilitation medicine specialists), Physiotherapists, Prosthetists and Orthotists? Others?
  o Personnel working as technical assistants in provincial rehabilitation units and CMR?
  o Persons delivering community rehabilitation services at district or village level, such as village health workers, others?

- What education and training have they received and from which institutions, either in LaoPDR or another country?
  Probe as needed:
  o Diploma or degree, rehabilitation qualification first or second one?

- Who are the employing authorities?
  Probe as needed:
  o MoH at CMR, Vientiane Hospitals, Provincial Hospitals, District Hospitals PRUs, INGOs, NGOs, Ministry of Labour and Social Welfare, private practitioners?

- What is the scope and nature of their work practices?
  Probe as needed:
  o As stand-alone practitioners or in teams? If teams, composition of teams?
  o Do they have and follow clinical guidelines? What are these? Are copies available?

- Are there trained rehabilitation personnel not in the rehabilitation workforce?
  Probe as needed:
  o If so, why not?
  o Are they looking for posts in the rehabilitation workforce?
  o Working in other jobs? Such as?

- Are there trained rehabilitation personnel working as administrators, teacher/ educators, or researchers?
  o If so, who are they and by whom are they employed?

- Are there rehabilitation personnel working as volunteers?
  o Is so, where and why?

Key issues of capacity, challenges and opportunities

- What are the strengths of the rehabilitation workforce?
  Probe as needed:
  o Standards of practice? Geographical distribution? Commitment to rehabilitation and people with disability?

- What are the weaknesses?
  Probe as needed:
• Standards of practice? Geographical distribution? Commitment to rehabilitation and people with disability?

• What are the key challenges facing the rehabilitation workforce?
  Probe as needed:
  o posts available, remuneration, workload, clinical/ professional supervision, lack of adequate training for client groups/ health system demands, access to additional training, access to equipment and technical resources, other workplace (support) issues?

_Educating the rehabilitation workforce_

• Are the educational resources appropriate for pre-service training courses?
  Probe as needed:
  o Staffing: qualifications, number, currency of knowledge?
  o Infrastructure: lecture, seminar, clinical training facilities?
  o Equipment: educational, technical, clinical?

• Are the clinical training resources appropriate for pre-service training courses?
  Probe as needed:
  • Enough clinical placements?
  • Clinical educators for placements?
  • Variety of clinical experience?

• Are the educational resources suitable for post-service graduate courses?
  Probe as needed:
  o Staffing: qualifications, number, currency of knowledge?
  o Infrastructure: lecture, seminar, clinical training facilities?
  o Equipment: educational, technical, clinical?
ANNEX VI: NUMBER OF PTS IN LAO PDR BY PROVINCE AND DISTRICT

Table 3 Numbers of PTs by province and district

<table>
<thead>
<tr>
<th>Province</th>
<th>District</th>
<th>Total PTs</th>
</tr>
</thead>
<tbody>
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<td>Phongsali</td>
<td>Phonsavan</td>
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<tr>
<td>Luangprabang</td>
<td>Vientiane</td>
<td>3</td>
</tr>
<tr>
<td>Xiengkhouaphan</td>
<td>Nongphou</td>
<td>1</td>
</tr>
<tr>
<td>Bangkok</td>
<td>Phnom Penh</td>
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</tr>
<tr>
<td>Battambang</td>
<td>Battambang</td>
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<tr>
<td>Kandal</td>
<td>Phnom Penh</td>
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<tr>
<td>Battambang</td>
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<tr>
<td>Phnom Penh</td>
<td>Phnom Penh</td>
<td>1</td>
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<tr>
<td>Battambang</td>
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<td>2</td>
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<tr>
<td>Phnom Penh</td>
<td>Phnom Penh</td>
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<tr>
<td>Battambang</td>
<td>Battambang</td>
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Data provided by national consultant Dr Singkham, CMR
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</tr>
<tr>
<td>3</td>
<td>Khoentoum</td>
<td>Thoedeh</td>
<td>2</td>
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<tr>
<td>4</td>
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<td>Phomphuch</td>
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<td>5</td>
<td>Xaychamphay</td>
<td>Melaray</td>
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<td>Xikham</td>
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<td>16</td>
<td>Xaykeubang</td>
<td>Champashe</td>
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</table>

Total 215 government posts
Table 4 Number of rehabilitation personnel at CMR and the 4 PRCs aggregated from data supplied by national consultant and COPE Program Manager

Name of Rehabilitation Unit: ..........CMR Vientiane and Champasak PRC, Xieng Khouang PRC, Luang Prabang PRC, Savannakhet PRC

Form completed by Prof Llewellyn with data provided by Dr Singkham and COPE Program Manager

2nd June 2015

Source of information: administrative records

Rehabilitation Personnel:

**CMR**

**Q1. Doctors**

<table>
<thead>
<tr>
<th>Title</th>
<th>Orthopaedic surgeon</th>
<th>Physical medicine doctor</th>
<th>Rehabilitation medicine doctor</th>
<th>Traumatologist</th>
<th>Total number</th>
</tr>
</thead>
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<td>M=0, F=0</td>
<td>M=0, F=1</td>
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**Q2. Allied health personnel**

<table>
<thead>
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<th>Title</th>
<th>PT</th>
<th>Occupational Therapist</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>M=12, F=43</td>
<td>M=6, F=0</td>
<td>M=18, F=43</td>
</tr>
</tbody>
</table>

**Q3. Prosthetists and Orthotists**

<table>
<thead>
<tr>
<th>Title</th>
<th>P&amp;O Cat 1</th>
<th>P&amp;O Cat 2(^1)</th>
<th>Cat 2, P only(^2)</th>
<th>Cat 2, O only(^2)</th>
<th>Total number of P &amp; O personnel</th>
<th>Cat 3/ Bench technicians(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>M=1, F=0</td>
<td>M=1, F=0</td>
<td>M=1, F=0</td>
<td>M=2, F=0</td>
<td>M=5, F=0 Total=5</td>
<td>M=3, F=0 Total=3</td>
</tr>
</tbody>
</table>

\(^1\) Persons studying at SCPO, Cambodia

\(^2\) Persons studying at Vietcot, Vietnam are Prosthetist Cat 2 OR Orthotist Cat 2

\(^3\) Cat 3/Bench technicians are represented separately – many are contractual staff trained on the job in Lao PDR, supported by COPE here as not all would have Cat 3 international level standard
**PRCs: Champasak, Xieng Khouang, Luang Prabang, Savannakhet aggregated**

**Q1. Doctors**

<table>
<thead>
<tr>
<th>Title</th>
<th>Orthopaedic surgeon</th>
<th>Physical medicine doctor</th>
<th>Rehabilitation medicine doctor</th>
<th>Traumatologist</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>M=0, F=0</td>
<td>M=0, F=0</td>
<td>M=0, F=0</td>
<td>M=0, F=0</td>
<td>M=0, F=0</td>
</tr>
</tbody>
</table>

**Q2. Allied health personnel**

<table>
<thead>
<tr>
<th>Title</th>
<th>PT</th>
<th>Occupational Therapist</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>M=7, F=28</td>
<td>M=0, F=0</td>
<td>M=7, F=28</td>
</tr>
</tbody>
</table>

**Q3. Prosthetists and Orthotists**

<table>
<thead>
<tr>
<th>Title</th>
<th>P &amp; O Cat 1</th>
<th>P &amp; O Cat 2$^1$</th>
<th>P only Cat 2$^2$</th>
<th>O only Cat 2$^2$</th>
<th>Total number of P &amp; O personnel</th>
<th>Cat 3/ bench technicians$^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>M=1, F=1</td>
<td>M=2, F=1</td>
<td>M=4, F=0</td>
<td>M=1, F=0</td>
<td>M=8, F=2; Total=10</td>
<td>10</td>
</tr>
</tbody>
</table>
## ANNEX VII: UHS GRADUATES IN PHYSICAL THERAPY AND CURRENT STUDENTS IN PT AND P&O

### Table 5 Graduates in Physiotherapy University of Health Sciences by course type

<table>
<thead>
<tr>
<th>Number of Physiotherapy graduates</th>
<th>Certificate/Diploma (former College of Health Sciences)</th>
<th>Associate Degree by 2 year bridging course (for Certificate/Diploma graduates with at least 5 years’ experience)</th>
<th>Associate Degree (3 years direct entry usually from upper secondary school**)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1069</td>
<td>26</td>
<td>73</td>
<td>1168</td>
</tr>
<tr>
<td>2015</td>
<td>-</td>
<td>28 (August)</td>
<td>31 (August)</td>
<td>1227</td>
</tr>
<tr>
<td>2016</td>
<td>-</td>
<td>24*</td>
<td>34***</td>
<td>1285***</td>
</tr>
</tbody>
</table>

* Number currently studying the Associate Degree bridging course  
** Likely to stop entry from 2017 into Associate Degree course  
*** Anticipated number of graduates according to current enrolment


First graduation will not occur until August 2018

Enrolments in new 3 year Associate Degree in Prosthetics and Orthotics commenced 2014, n=15.

First graduation will not occur until August 2017

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10 Provided by Dr Bouathep Phomindr, Associate Dean, Faculty of Medical Technology, University of Health Sciences
ANNEX VIII: COPE SHORT COURSE TRAINING

SURGICAL AND OTHER SHORT COURSE TRAINING

Annual Ponseti Method for treatment of club foot refresher courses for CMR/PRC (20 pax, including PT, P&O, physicians), co-facilitated by trained Lao national staff and CBM Orthopaedic advisor (2014: 1).

In 2012, a Ponseti method refresher training was conducted by CBM Orthopedic Adviser, Dr Steve Mannion for 20 staff in March. The CBM Orthopaedic Adviser conducted another refresher course in March 2013 for 10 CMR staff (1 doctor, 2 paediatric PT and rest were PO staff), and a half day Ponseti refresher training for 20 staff was conducted by Dr Steve December 2014.

Training for five orthopaedic surgeons from CMR and selected Vientiane and provincial hospitals by CBM orthopaedic advisor in areas such as surgeries for neglected club foot, genu valgum/varum, burns contractures and cerebral palsy[1]. (2013: 3 visits, 2014: 2 visits)

In 2012, 5 government health workers benefited from 2 orthopaedic surgical trainings in 2012, held by CBM Orthopaedic Adviser, Dr Steve Mannion, in March and November. Additional trainings for 3-5 surgeons (from Luang Prabang and Xieng Khuang PRCs, in addition to CMR) took place in March and May 2013.

In 2014, Dr Steve Mannion visited in April/May and conducted 2 surgical trainings, one in Pakse for 4 surgeons and one in Vientiane for 2 surgeons. An additional visit by Dr Mannion was made in December 2014, when 2 surgical trainings were conducted in Vientiane (with 2 surgeons) and in Luang Prabang (with participants from CMR, Luang Prabang, Oudomxai and the northern provinces).

[1] CP surgery skill development to be considered as an inclusion in the program in mid-Y2 for Y3, dependent on the development of surgical skills in the trainees
Table 6 COPE P&O, PT and OT short course training 2011 to 2014

P&O Training

<table>
<thead>
<tr>
<th>Training</th>
<th>Date</th>
<th>Participants</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gait Assessment Course</td>
<td>2012</td>
<td>11</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Assessment and Documentation</td>
<td>2012</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Serial Casting, Pavik and Giv Mohr device theory and fabrication</td>
<td>2012</td>
<td>18</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Audits at all 5 centers</td>
<td>2012</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfemoral (TF) Refresher course</td>
<td>July 2013</td>
<td>9</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Medical post-KAFO (knee, ankle, foot orthosis) course</td>
<td>August 2013</td>
<td>8</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Polypropylene refresher course</td>
<td>Sept 2013</td>
<td>9</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Audit and on the job training at all 4 PRCs</td>
<td>May, Aug, Sep 2013</td>
<td>19</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>Audit and on the job training in Pakse, Luang Prabang, Xieng Khuang</td>
<td>Jan, Feb, Mar 2014</td>
<td>15</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Hinge AFO training for CMR and PRC P&amp;Os</td>
<td>Feb 2014</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Mirror Therapy Training for P, O, PT and OTs to treat phantom limb pain</td>
<td>Jan/Feb 2014</td>
<td>33</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Ischial Containment Prosthetic Course for prosthetists</td>
<td>Mar 2014</td>
<td>8</td>
<td>8</td>
<td>0</td>
</tr>
</tbody>
</table>

PT Training

<table>
<thead>
<tr>
<th>Training</th>
<th>Date</th>
<th>Participants</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>neurological assessment development, management of spinal pain patients and building of clinical reasoning skills</td>
<td>2011</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>Date</td>
<td>Participants</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>Gait Assessment Course</td>
<td>2012</td>
<td>17</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Assessment and treatment of the Cervical Spine and Thoracic Spine</td>
<td>2012</td>
<td>29</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Paediatric PT intervention for children with cerebral palsy and similar conditions</td>
<td>2012</td>
<td>14</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Paed PT rotations to Vientiane</td>
<td>in May and July/August 2013</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Paediatric Rehabilitation – Occupational Therapy and Physiotherapy Assessment and Intervention</td>
<td>July 2013</td>
<td>27</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Gait training course</td>
<td>Dec 2013</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>PT OT Peer to Peer Training Course (also mentioned below)*</td>
<td>4 times 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OT Training**

<table>
<thead>
<tr>
<th>Training</th>
<th>Date</th>
<th>Participants</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT management for stroke patients, assessment and treatment for paediatrics, and postural management and oral motor skills</td>
<td>2011</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurological assessment of the infant and development of motor skills</td>
<td>2012</td>
<td>16</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Paediatric Rehabilitation Assessment and Treatment</td>
<td>2012</td>
<td>21</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Cerebral palsy gait therapy</td>
<td>2012</td>
<td>17</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Paediatric Rehabilitation – Occupational Therapy and Physiotherapy Assessment and Intervention (also mentioned above)</td>
<td>July 2013</td>
<td>27</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>OT audit trips: Luang Prabang, Oudomxay and Xieng Khuang</td>
<td>May 2013</td>
<td>10</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>
**OT audit trips: Champassak and Savannakhet**  
| July 2013 | 6 | 3 | 3 |

**PT OT Peer to Peer Training Course (also mentioned above)**  
| 4 times 2014 | |

* PT OT Peer to Peer Training Course topics in 2014:
  
  - 4-6 March, Xieng Khuang: Lumbar spine assessment (26 participants)
  
  - 10-12 June, Champassak: Cervical and thoracic spine assessment (26 participants)
  
  - 9-11 September, Savannakhet: OT for adult stroke patients. Review assessment and documentation on neurology and orthopaedic assessment form (29 participants)
  
  - 22-24 December, Vientiane: Cerebral palsy. Revision of stroke (25 participants)
END OF REPORT