

people in villages are not aware of the services available in the hospitals. This is one of the most serious obstacles to the full use of hospital services.

(2) Current situation of infrastructure for access to health facilities

1) Transportation

Transportation in Lao PDR is mainly by road and river. However, the transportation system is underdeveloped relative to adjacent countries, mainly due to geographical barriers. The road network accessible by vehicle is shown in Appendix 6. It is still very limited, and has been expanded only gradually through the construction of roads and bridges.

The IRAP project has begun improving access roads in 8 provinces, and has introduced the concept of community roads.

2) Communications

In order to construct and expand the network of health facilities in Lao PDR, communications are crucial. While telephone and fax communications are possible between MOH and the all provincial health offices and hospitals, communication between district health offices and provincial health offices depends on the telephone system. Some districts have not been connected to the telephone yet.

The situation has, however, improved with wireless transmitters and receivers for communications between provincial health office and district hospitals and health centres having been installed in some provinces with the support of a JICA Public Health Project. Subsequently, the project to “Develop a Radio Transceiver Network for EPI in Lao PDR” has furnished wireless transmitters and receivers with the support of MHN Association (an NGO) and Senior Volunteers provided by JICA. The operation of the car-battery-operated radio transceivers is simple, with only 1 or 2 hours’ training required, and so health staff in each facility were trained at the time of installation. Installation costs US\$150 per station, which is paid by the provincial office, and requires government approval, either of which facts can hinder installation in some provinces. Major damage has been reported in some cases due to lightning and strong winds.

From the survey of health facilities, 20 district hospitals answered they do not have any access to communication methods such as telephone or radio transceiver.

3) Evaluation of Accessibility

For the purpose of evaluating the accessibility of health services, several criteria have been used in Laos. Questions on access to health facilities were included in the National Health Survey 2000, the Household Survey in 11 provinces of Lao PDR supported by ADB, and IRAP’s survey.

Table 8.10 Criteria for Evaluating Access to Health Services

Household survey in 11 provinces of Lao PDR (ADB)*1	IRAP*2
<ul style="list-style-type: none"> ■ Clean Water ■ Four hours to a hospital during dry season ■ One hour to a Health Centre during the dry season ■ 4 EPI visits during the last year ■ Minimum 1 bed net impregnation session during the last year ■ Impregnated one bed net during the last year ■ Patients seeking care at Government Facilities in the first instance ■ Deliveries attended by a trained medical practitioner 	<ul style="list-style-type: none"> ■ Health Facilities in the Village ■ Time for Travel to nearest Pharmacy / Health Centre ■ Time for Travel to nearest Clinic / Hospital ■ Village with Government Health Staff ■ Village with Health Volunteers ■ Total No. of Visits of Health Workers ■ Availability of Medicines in the village ■ Villagers' perceived Problems ■ Villagers' perceived Priorities

Source: *1 - Household survey in 11 provinces of Lao PDR (ADB), *2 - Training Modules on Data Analysis, IRAP

The results of the IRAP survey were used to examine accessibility, and the conclusions from the survey have been fed into rural development plans as well as road development plans.

8.4 CONDITION OF HEALTH FACILITIES AND EQUIPMENT

8.4.1 General Condition of the Health Facilities

The services to be provided in each facility are shown in Table 8.11.

Table 8.11 Services to be Provided by Health Facilities at Each Level (Planned)

Category	No. of Beds	Service to be Provided
Central Hospital	Mahosot 450beds Friendship1 50beds	Tertiary curative care. The third level in the referral system. Some hospitals function as teaching hospitals. Comprehensive and specialist medical care for outpatients and inpatients, scientific research and technical assistance for every hospital in the country.
Regional Hospital	Not decided	The second level in the referral system. Curative services at provincial level. Responsible for providing health care for the entire region. Centre for health development and primary health care. Responsible for monitoring and conducting training for health personnel in the region
Provincial Hospital	Not decided (previously 60-100)	The second level of referral system. Treatment and rehabilitation services for patients with all varieties of illness. Emergency and surgical care. Responsible for training all categories of professional health staff.
District Hospital	10-15 beds	The first level in the referral system. Health care services, disease prevention, health promotion, diagnosis, treatment of the most common diseases, Mother and child care, outreach services, logistic support and supervision of services in the district. Responsible for planning and implementation of Primary Health Care in District.
Health Centre	2 beds	Treatment of basic diseases, MCH services, prevention, health promotion and supervision of village health volunteers.

Source: Health Strategy up to Data from Paediatric Infectious Disease Prevention Project (2001) 2020, and Policy on Primary Health Care

Table 8.12 shows the actual conditions of central and provincial hospitals. It should be noted that the capacity and bed occupancy rate of the provincial hospitals vary greatly.

The capacity of the provincial hospitals ranges from 20 to 250, while bed occupancy rates range from 18.91% to 81.48%, and the ratio of people per provincial hospital bed varies from 1,350 in Sekong to 6,540 in Vientiane Province. The standard design of provincial hospitals used to allow for 60 to 100 beds, but this number is now being reconsidered along with the provision of other facilities.

Table 8.12 Number of Beds and Bed Occupancy Rates (Actual)

	No. of Beds (beds)	Bed Occupancy Rate (%)		No. of Beds	Bed Occupancy Rate (%)
Central Hospitals and Special Centres					
Mahosot	450*2	49.09%*2	Ophthalmology Centre	30*2	44.0%*2
Friendship Hospital	150*2	60.36%*2	Dermatology Centre *	20*3	42.0%*2
Mother and Child Hospital	40*3	89.90%*2	Tuberculosis Centre	48*2	59.4%*2
Rehabilitation Centre	50*3	100%*2	Traditional Medicine	0*3	
			Total Number of Beds	788	
Provincial Hospitals					
Vientiane Municipality **	200*2	35.93%*1	Vientiane Province	50*2	77.12%*1
Phongsaly	70*2	18.91%*1	Bolikhamxay	70*2	33.35%*2
Luangnamtha	70*2	42.41%*1	Khammuane	147*1	66.92%*1
Oudomxay**	82*2	55.99%*1	Savannakhet**	221*1	54.92%*1
Bokeo	70*2	57.80%*1	Saravane	115*1	40.92%*1
Luangphrabang**	200*2	81.48%*1	Sekong	54*2	42.05%*1
Huaphanh	120*2	50.94%*1	Champasak**	250*2	67.62%*1
Xayaboury	120*2	40.79%*1	Attapeu	70*2	51.28%*1
Xiengkhuang	70*2	57.01%*2	Xaysomboun SR	20*2	
			Total Number of Beds	1,779	
District Hospitals			Total Number of Beds	2,306*2	
Health Centres			Total Number of Beds	1,241*4	

Notes: ** Hospitals earmarked as future Regional Hospitals

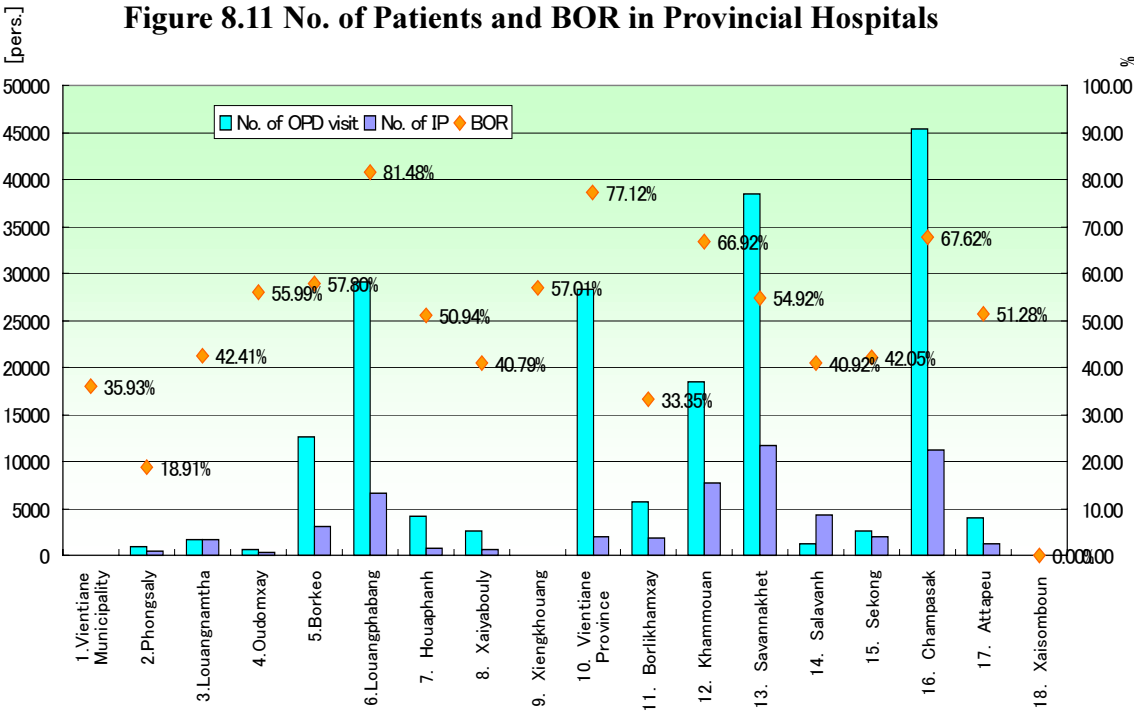
Source: *1 - Report Table 01B: Hospital Activities Year 2000, Health Statistic Division,

*2 - Report on Activities of 2000-2001 of Curative Department,

*3 - Oral information from Curative Department and each hospital, 2001

*4 - Health Strategy up to the Year 2020

Of the hospitals to be upgraded to regional hospitals, Oudomxay is the only hospital with a bed capacity is less than 200. Notably, its bed occupancy rate is only 55.99%. The bed occupancy rates are not high in most hospitals. Rates of over 70% are found in only three hospitals and a rehabilitation centre.



Source: Report Table 01B: Hospital Activities Year 2000, Health Statistic Division, Report on Activities of 2000-2001 of Curative Department

The total number of beds including health centres is 6,144, and the bed ratio per 1,000 population is 1.17. This ratio is lower than the average of 1.45 for low-income countries¹.

Table 8.13 shows the conditions of other health facilities.

Table 8.13 Conditions of Other Health Facilities

	Functions	Condition of Facilities
Centre for National Laboratory and Epidemiology (CNLE)	Three main functions: <ul style="list-style-type: none"> National Reference Laboratory National Unit of Epidemiological Surveillance of Infectious Diseases Outbreak Investigation At provincial level: laboratories in the Provincial Hospitals.	Laboratory in central level Old building, originally built as a dormitory for church, was converted to Laboratory. The building is old and there is insufficient space, although existing capacity is used well.
Malariaology, Parasitology, and Entomology Centre	Five main functions: <ul style="list-style-type: none"> Vector control of Malaria Diagnostic ant treatment of Malaria IEC for control of Malaria 	1 Centre at central level 18 Malaria Stations at provincial level. Two buildings.

¹ World Bank: Public Hospitals in Developing Countries

	<ul style="list-style-type: none"> • Training for health staff • Drug monitoring etc. <p>Malaria stations in each province have similar functions, but are responsible for activities at district level. Laboratory examination is co-ordinated with the laboratory in the Provincial Hospital.</p>	One built by EU five years ago, including Laboratories, project office, a conference room, a laboratory for training and a resources centre
Institute of Public Health	<ul style="list-style-type: none"> • Research activities, also consulted for matters of government policy • Science and technology policy • Implementation of health research activities • Postgraduate training in public health management • Advises, monitors, assists and evaluates technical activities • Guiding human resource development • Co-ordinating office for all council of medical sciences activities 	<p>PHC centres in some provinces</p> <p>Main building</p> <p>The new building for training is under construction.</p>

Source: Oral information from each facility

8.4.2 Guidelines for Hospitals and Health Centres

Provincial health offices are currently responsible for maintaining and equipping health facilities at sub-provincial level, with the support and supervision of the MOH. However, the Curative Department intends to change its policy on the supervision of provincial health offices in order to improve the quality of service provided in hospitals.

The Curative Department is preparing guidelines regarding hospital service, building, equipment and drugs etc. The meetings regarding the facility, equipment, drugs, and personnel recruitment for district hospitals and health centres have been held by ADB support. In the minutes of meetings, a draft of the standard facilities, equipment, drugs, and health personnel are described. Table 8.14 shows the draft of components of standard facilities in the minutes of meeting in the March, 2001.

Table 8.14 Facility Components of District Hospital and Health Centre (Draft)

	Description	Facility components		
		Type A	Type B	
District Hospital	Two types (Type A and Type B) Capacity: 15-30 beds, Floor area: 2,000-3,500 m ² Construction cost: US\$150,000 ~ 250,000 Service population: 10,000-50,000 persons TypeA : Two floors. The ground floor is for hospital services, and the first floor for administration and health promotion Medium level operations can be carried out TypeB : One floor. Minor operations only	Operating theatre	Yes	Yes
		Delivery room	Yes	Yes
		X-ray room	Yes	No
		Emergency room	Yes	Yes
		ICU	Yes	Yes
		Patient ward	Yes	Yes
		Dental room	Yes	Yes
Health Centre	Two types (Type A and Type B) Capacity: 2 beds, Construction cost: US\$15,000 ~ 20,000. Service population: 3,000-5,000 persons Model design: GTZ's HC design Location: close to community, and preferably near schools Kitchen, dormitory for nurse, latrines, a well, a place for burning garbage are also to be included.	Patient ward	Yes	Yes
		Pharmacy	Yes	Yes
		Examination Room	Yes	Yes
		Injection Room	Yes	Yes
		Waiting Room	Yes	Yes
		Analysis Room	Yes	No

Source: Minutes of Meeting on March 5-7, 2001

a. District Hospitals

A model plan was prepared, based on the design of the new Sethathirath Hospital, because of its functional, compact and cost-effective design. The criteria for selection of Type A and Type B hospitals, and the differences in their functions are not clear yet. It is thought that the new Type A hospital will be equivalent to the inter-district hospitals in Savannakhet and Sekong.

b. Health Centre

There are several types of Health Centre building in Lao PDR, because different donor projects have developed their own designs. Among several types of buildings, the GTZ design was selected as a model due to its functional and cost-effective design.

8.4.3 Current Conditions of Existing Facilities and Equipment

The current conditions of some health facilities are shown in Table 8.15. Planning of hospital facilities and equipment is based on the functions and services to be provided by each facility.

(1) Conditions of Health Facility Buildings

Guidelines for the standard of facilities in hospitals and health centres have not been produced, and each province and hospital arranges expansion or renovation according to its own plans. Clearly, guidelines are needed to maintain a standard level of facilities at each level and in each area.

- 1) Differences in the level of facilities at central, provincial and district hospitals depend largely on the support they have received from donors or international organisations in the absence of an MOH standard policy. The need for standardisation is pointed out in the Health Strategy 2020, and the Curative Department have been making efforts to produce guidelines for the standardisation of services, staffing, infrastructure and equipment.
- 2) As mentioned in the Health Strategy 2020, the establishment of the referral system requires a guideline to support the minimum requirements for facilities at each level.
- 3) The expansion and improvement of most provincial hospitals has been supported by donors. Some hospitals are now very old, and in some cases, frequent ill-planned expansion and renovation have rendered them complicated and ineffective.
- 4) Service levels vary among same level hospitals. Facilities and equipment, as well as the quality of staff, are important factors for improving the quality of services. Many facilities are not equipped to maintain the level stipulated in the draft guideline mentioned above. There are some cases that distribution of staff, facilities and medical equipment are not coordinated. For an effective investment, a facility should be equipped on the assumption that it will be allocated its full staff quota. Figure 8.12 shows distribution of district hospitals providing laboratory service and district hospitals which have staff trained for laboratory services.

Figure 8.12 Distribution of Laboratory Test and Laboratory Staff



Source: JICA Study Team, Facility Base Survey

- 5) The condition of health facilities and the service they provide depend also on the state of basic and vital infrastructure. Some district hospitals and health centres in remote areas do not have electricity, water, or communication methods. According to the facility based survey, 20 district hospitals do have any source of electricity, and 8 district hospitals have only generators without external electricity supply. One district hospital does not have any source of water, and 6 district hospitals use water carried from a river.
- 6) A health centre should be simple and compact, yet in practice the design of buildings, building components, structure and utilities differ according to the sources of funding, and policy of supporting donors. Establishment of standard for service, infrastructure and equipment is especially important from the point of view of procurement of spare parts and training of staff in maintenance.

- 7) There are some facilities that have some gap between the planned number of beds and actual number received. There are some differences in the number of patients cared for among the facilities in each level.
- 8) Number of patients and bed occupancy rates vary between each level of service, and in some cases, very low indeed. Available staff skill and their performance, infrastructure and equipment affects these conditions.
- 9) The condition of buildings also depends on the management of staff in each facility, not only on how old the buildings are.

(2) Conditions of Equipment

When the procurement of equipment is planned for a health facility, factors such as the functions of the hospital, infrastructure, level of operators, financial conditions for maintenance and repair, the budget for recurrent expenditure, and the number of patients need to be considered. But it is of vital importance to plan the type of medical care service that should be provided by the health facility. The type and quality of medical services to be delivered.

Points observed during the MOH-JICA survey are summarised below:

- 1) Among district hospitals, the medical service provided to the public varies significantly: some provide X-ray and ultrasound diagnostic examinations, whereas others provide only simple first-aid treatment and administer medicine.
- 2) The medical service provided by health centres also varies considerably. Some centres provide clinical laboratory tests and/or surgical operations, whereas others provide simple first-aid treatment only.
- 3) The equipment furnished in the different medical facilities varies with the different services provided.
- 4) Existing equipment are obsolete except for some new or second-hand equipment procured recently.
- 5) X-ray and ultrasound imaging equipment, classified as Essential Medical Equipment by WHO, are used in some medical facilities but are often out of order because spare parts are not available.
- 6) The numbers of both outpatients and inpatients have decreased in some facilities following the introduction of Drug Revolving Funds.
- 7) While some health centres are staffed by a medical doctor, a trained nurse and a laboratory technician, others have only a village health volunteer.

Table 8.15 Condition of District Hospitals

Name	Target/HC No	Staff	Outpatient /Month	No. of Bed	Delivery	Test / Examinations etc.	Equipment	Facility
Nga DH (Oudomxay)	Ca 4,000 3HCs	1 MD 1 M assistant 1 Nurse	70 to 120 outpatients per month	15 beds	No (at home or provincial hospital)	Laboratory test - Malaria test X-ray : No Ultrasound : No	Exam table Weight meter for adults Refrige for EPI Boiling water sterilizer Microscope	Waiting space Consultation room Family Planning room Laboratory Pharmacy Wards
Hatxayfang DH (VTE Mun)	Population: 7,310 Village: 58 HCs: 7	2 Admin 6 MDs 10 M Assistant 15 Nurses 1 Lab tech 2 Dental MA	Outpatients: Approx 1000 to 1500 Dental outpatient: 15 to 20 / day	10 general beds 3 Ob/Gyn beds 8 TB beds	Normal delivery only. 40% at DH, 30% at home 30% at central hospital	Laboratory test -Bacteriological test -Urine test -CBC -Blood differential count X-ray : No Ultrasound : No	Delivery table Autoclave Oxygen cylinder Weight meter for adult Stand type op lamp Microscope	OPD Bldg: Waiting space Consultation room Pharmacy Wards Bldg.
Chanthabouly DH (VTE Mun)	Population: approx 6,000 Village: 37 Household: 11,332 No HC in District	9 MDs 11 M Assistant 6 Nurses 2 Ax nurses 1 Typist 1 General labour	Outpatients: 800 to 1000 Emergency : 16 to 60 (Patients after 16:00 are counted as emergency case)	8 beds	Normal delivery only	Laboratory test -Haematology test (CBC, Differential count) -Malaria test X-ray: No Ultrasound: No Dental: Yes	Small autoclave Small washing machine Dental chair (out of order) Microscope	Consultation Rm. MCH Room, Gyne consultation, Delivery Rm., Emergency Rm, Dental Rm, Laboratory, Gen Ward, Pharmacy, Laundry Adm.Rm. Meeting Rm.
Sisatanak DH (VTE Mun)	40villages 9,706H/Hs Pop 52,515 5HCs (No permanent staff, Mobile team from DH)	8 MDs 6 M Assistants 16 Nurses 3 Midwives 3 Dentists 4 Pharmacists 3 Others	Outpatients: approx 670 and emergency patients Inpatients: 100	15 beds (general) 7 beds for emergency case	Normal delivery and Caesarean section	Laboratory test -Bacteriological test -Haematology test X-ray : Yes Ultrasound : Yes Dental : Yes	X-ray diagnostic equip Ultrasound diagnostic equip ECG Surgical knife ECG monitor Dental chair Suction unit Ambulance	OPD Bldg.: Consulation, Ultrasound, X-ray, Dental, Operation, Labo MCH&IP Bldg: Consultation, Immunization+FP Gyn.consultation ADM,Emerg, Nutrition, Bldg.

Name	Target/HC No	Staff	Outpatient /Month	No. of Bed	Delivery	Test / Examinations etc.	Equipment	Facility
Saysetha DH (VTE Mun)	Pop.79,000 9 districts 4 HCs(2 staff each, 1MD, 7nurses)	MD 4 Dentist 2 MA 11 Nurse 8 (Lab tech 2)	(Aug.2001) OPD 250pers /month IPD 25pers/month	General ward 5 beds MCH 2beds BOR45% Patient stay Ave. 3days	Normal Delivery	Laboratory test -Blood sear test -Stool test X-ray : No Ultrasound : No Dental : Yes	Dental chair2 Delivery bed Microscope2 Refrigerator Freezer Centrifuge 4 Motorbike	Consultation – general ward Laboratory Staff room Dental room MCH consultation Delivery room Staff office etc.
Thourakhom DH (VTE Province)	Pop.47897 74 villages 2 HCs	MD 4	OPD 2014/year IPD 268case/year OPD 1.5-13%	General ward 15 beds	Delivery	Laboratory test -Blood smear test -Parasitological Test -X-ray : No -Ultrasound : No Dental : No	Microscope Delivery bed Obs.Examination bed Examination lamp Examination table Weight scale for adult Cot	Consultation Rm. MCH Consultation Delivery Minor surgery Laboratory Physiotherapy Wards
Bachieng DH (Champasak)	Pop.35534 H/H 6553 94 villages	MD 1 MA 4 P Nurse 12	OPD 1924/year IPD 672pers/y 4442 pd/y BOR 41.12%	30 beds	Delivery	Laboratory test -Blood smear test -Parasitological test -Urine test -Sputum smear test X-ray : No Ultrasound : No Dental :	Weight scale Delivery table Autoclave Microscope Stethoscope Sphygmanometer Thermometer Examination table, etc.	258m2 Consultation Rm. MCH Rm. Waiting space Laboratory Pharmacy Delivery Rm. Wards(Ped, OB/Gyn, Isolation)
Kong Sedon DH (Saravan)	Pop.52087 H/H 7934 107 villages	MD 5 MA 8 Pharmacist 1 Dentist 1 R Nurse 1 P Nurse 24	OPD 8723/year IPD 3706/year BOR 60.3%	35 beds	Delivery Caesarean section	Laboratory test -Blood smear test -Parasitological test X-ray : Yes Ultrasound : No Dental :	Ambulance Delivery table Examination table, Stethoscope Sphygmanometer Microscope, Anaesthesia apparatus Surgery instrument Operating table Shadowless lamp Sterilizer	Consultation Rm. MCH Rm. Dental Rm. Waiting space X-ray Rm.Laboratory Pharmacy Operation Theatre Delivery Rm. Minor surgery Rm. ICU, Ward(General, Ob/Gyn., Workshop

8.5 OPERATION AND MAINTENANCE SYSTEMS FOR HEALTH INFRASTRUCTURE AND EQUIPMENT

8.5.1 Maintenance of Health Infrastructure

(1) Current Situation

The Health Property Management and Construction Unit of the Department of Planning and Finance, MOH is in charge of maintenance aspects of health infrastructure, which has 8 staff including 1 architect and 3 civil engineers.

Their duties are management of MOH property, technical support for the construction or renovation of health infrastructure, implementation of tendering processes and supervision of construction as a representative of MOH, arranging for the procurement of construction materials and the preparation of guidelines for the health facilities.

The maintenance of hospital buildings is arranged by each hospital, for which there are no guidelines or recording/reporting systems. Most of the cost of repair work is covered by hospital income from Revolving Drug Funds or User Fees. However, in the case of major renovation or expansion, hospitals have to request a budget allocation from MOH, in which case the hospital will be consulted by the Curative Department and the Construction Unit.

Table 8.16 Hospital Maintenance Staff

	Maintenance Unit	Carpenter	Elec. Engineer	Plumbing Eng.	Elec. Tech	Pumbing Tech	Equipment	Mechanical Technicians	Others	Total No.
Mahosot Hospital	Yes				4	1		2		7
Friendship Hospital	Yes		1			12				
1. Vientiane M.H.	Yes	1			1	1	1			9
2. Phongsaly PH	No									0
3. Luangnamtha PH	No									0
4. Oudomxay PH	No									0
5. Bokeo PH	No									0
6. Luangphrabang PH	Yes	1			1					4
7. Huaphanh PH	No									0
8. Xayaboury PH	Yes				1					1
9. Xiengkhuang PH	No									0
10. Vientiane PH	Yes		1	1			1			4
11. Bolikhamxay PH	Yes				1				1	2
12. Khammuane PH	Yes	1			1					2
13. Savannakhet PH	Yes				1		1			2
14. Saravane PH	Yes		1							1
15. Sekong PH	No									0
16. Champasak PH	No									0
17. Attapeu PH	No									0
18. XaysombounSR H	No									0
Total	Yes:8PH	3	2	1	6	1	3		1	25

Source: JICA Study Team, Facility Based Survey in 2002

Table 8.16 shows the number of maintenance staff in central hospitals and provincial hospitals. Central hospitals and some provincial hospitals have their own maintenance unit and some engineers or technicians, but only a few district hospitals have maintenance staff.

Even if hospitals have maintenance engineers or technicians, the level of their technical skills tend to be insufficient. Therefore, some hospitals try to train them in parallel with newly recruiting engineers. In most hospitals, daily cleaning is performed by hospital staff, and regular checking and maintenance are seldom carried out.

When the new Sethathirath Hospital was constructed, a new maintenance unit was established, as there had been no system before. The training of technicians have begun during the construction stage. Since Sethathirath Hospital is a general hospital providing 24-hour care, the hospital is trying to establish a 24-hour maintenance system. A major problem occurs in the plumbing works, because many people do not know how to use the toilet and bath properly. To avoid such problems, nurses need to explain to the patients the proper methods.

In many of the cases communities participate in the construction of health centres, organised not only by donors, but also by district governors or district health officers. Participation might mean providing construction materials, or external work such as construction of fences and wells. Some projects, however, have had difficulties regarding community participation. Certainly the maintenance of buildings depends not only on health staff but also on community participation. Health centres rarely have operational or maintenance capabilities.

8.5.2 Maintenance of Equipment

(1) Organisation of maintenance in hospitals

Mahosot and Friendship Hospitals have one and two service engineers, respectively, who can maintain and repair equipment. In other hospitals or medical institutions, equipment that becomes out of order is apt to remain so for years. The newly established Medical Equipment Service Centre(MEC) is expected to improve this adverse situation.

(2) Medical Equipment Service Centre

In July 1998, the Department of Equipment Maintenance was established within the Ministry of Health and engineers were assigned therein. In September 1999, a building for the Medical Equipment Service Centre was constructed. The purposes of the centre are: (1)maintenance of equipment in the Ministry of Health and hospitals in particular, and (2) training of service engineers for hospitals and other medical institutions.

8.6 ISSUES IN HEALTH INFRASTRUCTURE AND EQUIPMENT

8.6.1 Issues Regarding the Distribution of and Access to Health Facilities

Major findings and issues are as follows:

- (1) The geographical distribution of health facilities is uneven. According to the National Health Survey 2000, provision in the north is much worse than in other regions, with 61.7% of villages located more than 4km from the nearest health facility. In the southern and central regions, a large discrepancy is also noticeable between areas along the Mekong river and the area near the border with Vietnam.
- (2) The services provided by district hospitals depend not only on the quality of their staff, but also on the infrastructure and equipment they possess. X-ray examination, ultrasound examination and laboratory tests are available only in a limited number of district hospitals. Some district hospitals do not even have a delivery room. Therefore, the distribution of facilities and their functions will require full consideration.
- (3) While the number of health facilities has increased, there are still too few facilities to provide certain health services to the whole population. Most health centres, for example, are located along the main roads in order to maintain access to and from district and provincial hospitals and neighbouring villages. This leaves remote areas without health facilities. The location of health centres are sometimes decided on political grounds. There should be community participation in the process of site selection in order to satisfy popular demand.
- (4) Service levels in some district hospitals are very low and they receive patients from a limited area only. Many patients visit the provincial hospital directly without being referred from district hospitals. It is thought that reasons include the limited capacity of staff and the limited services offered by district hospitals, as well as difficulty of access. Strengthening of curative services as well as PHC activities are required in order for district hospitals to be effective.
- (5) Even if a health centre is designed to cover 10 villages, the patients who visit tend to come only from the closest villages. Therefore, the service area as envisaged by providers do not correspond to that used by receivers, and there are also differences in the service received between the villages close to a health centre and those without easy access.
- (6) In the remote areas, access to health facilities becomes especially difficult in the rainy season. It takes a long time to reach a road served by public transportation, while river transportation is not available in the rainy season, and footpaths in mountainous areas become difficult to use. So while some villages are inaccessible during the rainy season, others can only gain access to health facilities by using alternative routes and/or means of transport.

- (7) Other reasons which prevent people from visiting hospitals are they think that they do not have time because they have to take care of children and their fields, they cannot afford the costs of transportation and hospitalisation, and that they are deterred by language barriers.
- (8) Home visits by health staff are conducted in many health centres. In remote areas, home visits are major events in which health staff visit villagers' homes for delivery support and postpartum care. In some cases, health staff prefer home visits. From the view point of health promotion, home visiting is very effective, but on the other hand, it keeps staff away from the health centres. The absence of staff is one of the main reasons that prevent people from visiting health centres since there is only one nurse in many health centres.

8.6.2 Issues Regarding the Existing Health Infrastructure and Equipment

Major findings and issues are as follows:

- (1) The condition of health facilities differs considerably and seems to be largely dependent on donor support. The development or improvement of hospitals depend very much on the priorities of various donors' projects.
- (2) The functions of hospitals and the services they provide are not clearly defined and standardised. District hospitals, in particular, vary enormously in terms of levels, capacity and type of buildings. Some hospitals, whose buildings are old or have been expanded and renovated several times, are overcomplicated and inefficient.
- (3) There are several plans regarding hospital expansion, but the appropriate capacity and level of each hospital needs to be studied carefully depending on their capability and size of population to be covered.
- (4) In most cases, patients are accompanied by their family. In some cases, these caretakers stay in in-patients wards, and it is difficult to keep the wards clean. If MOH is counting on patients family to take care of patients in hospitals, it is necessary to teach the patients family how to use the facilities.
- (5) Some medical building facilities are inadequate for use as a health facility. The design of X-ray rooms, the designation of sanitary and unsanitary areas of operating theatres, floors and wall finishing, and the circulation line of patients and staff in some hospitals are also should be improved.
- (6) In some hospitals, facilities and equipment are not fully utilized, because the distribution of physical resources, such as special facilities and medical equipment does not correspond to the allocation of skilled staff.
- (7) Waste management is not well administered in most hospitals. Disposal system of medically and chemically contaminated substances and materials in hospitals should have urgent attention. Guideline or rules should be designed by MOH or each PHO.
- (8) The number of hospital beds has increased; however an optimal level has not been

achieved yet. However, the bed occupancy rate of each hospital remains quite low. There are two reasons for this: one is the low utilization rate of the hospital as a whole, and the other is that the occupancy rate is low in due to the large number of out patients. The following factors contribute to the low utilization rates;

- hospital can not answer to the people's expectations and demands because of the limited service capacity of the hospital,
- it is difficult for people to pay the cost for transportation and meals to stay at the hospital,
- low awareness of the people in remote areas regarding health and health services,
- absence or lack of staff in health centres, and
- language barrier exists especially for the ethnic minorities.

8.6.3 Issues Regarding the Operation and Maintenance of Health Facility and Medical Equipment

Major findings and issues regarding maintenance of health facilities are as follows.

- (1) The recruitment and retention of skilled and experienced engineers for maintenance should be considered, though it is very hard for hospitals, because maintenance of hospital buildings, utilities and equipment is not an attractive job due to the low salary and the nature of the work.
- (2) MOH and provincial health offices need to allocate budgets for maintenance of infrastructure and equipment as well as hospital services.
- (3) Daily maintenance and periodical maintenance are only carried out in hospitals which have maintenance engineers. It would be more effective and economically feasible to establish a joint maintenance system in each province.
- (4) Some hospitals are not able to keep their buildings clean. Staff should be encouraged to organise regular cleaning. Some hospitals need to train and motivate their staff to keep hospitals clean.
- (5) Instruction of patients in the use of sanitary facilities is also required.
- (6) Community support is very important for the operation and maintenance of health centres, and there are some cases where communities are cooperative, and they have established a health centre board or a health centre committee.
- (7) The daily maintenance of health centre buildings by staff is most important, as is community support.
- (8) It is difficult to cover and maintain many different kinds of medical equipment with a small number of engineers.
- (9) There is often insufficient operation and maintenance information available for used or

second-hand equipment.

(10) Standardisation of spare parts is difficult due to the variety of equipment and manufacturers.

CHAPTER 9

HEALTH FINANCE

9.1 INTRODUCTION

The Health Finance component of the study aims at identify main financial constraints to improving the health situation in Lao PDR and achieving the goals defined for 2020, and identify feasible solutions and strategies to address these problems. This chapter focuses on summarizing the financial patterns in the Lao health sector and identifying main issues to be addressed. In many cases, these issues have been identified from a review of existing documents and data, and a partial update on the current situation obtained from interviews with government officials and other donors' staff. The discussion given in Section 9.4 is preliminary, and further data and in-depth analyses will be needed to complete the assessment of these issues and reach final conclusions and recommendations.

9.2 BACKGROUND INFORMATION

9.2.1 Objectives and Policies for 2020

As stated in the Health Strategy up to the Year 2020 document¹, the general objective for the Lao health sector in the years to come is to “free the health care service in Lao PDR from the state of underdevelopment, ensure full health care service coverage, justice and equity in order to increase the quality of life of all Lao ethnic groups”. This will be achieved through:

- Application of four basic principles: Full coverage and equity, Early integrated services, Demand-based services, Self-reliant services;
- Pursuit of six main health development policies: Strengthen providers' ability, Improve community-based promotion and prevention, Improve and expand hospitals at all levels, Promote and strengthen the use of traditional medicine and integrate it with modern care, Promote operational health research, Ensure effective administration and management, and financial self-sufficiency, establish a health insurance fund;
- Organization of actions within six priority programmes: Health prevention and promotion (PHC), Curative and rehabilitative, Consumer protection, Human resource development, Operational research and legislation, Health administration.

The promotion and expansion of good quality Primary Health Care services is the main stated strategy to achieve the goals set forth for 2020. This expansion should be financed through the mobilization of additional financial resources, namely:

¹ Ministry of Health: *Health Strategy up to the Year 2020*. Vientiane, May 2000.

- Increase beneficiary financing through Drug Revolving Funds and Cost Recovery Systems at facilities at all levels;
- Develop systems to protect the poor and guarantee equitable access (20% of the population is expected to be exempted from payment of user fees);
- Increase public investment (as a % of GDP and % of government budget);
- Mobilize international assistance (Multilateral, bilateral and NGOs);
- Develop, test and implement health insurance schemes in three main areas: civil servants, state sector, and private sector.

The feasibility and implications of these strategies will be discussed in Section 9.4.

9.2.2 Organization of the Health System

The Lao health sector comprises four main levels of public facilities, a collection of programs and interventions supported by international donors and NGOs, and a growing number of local, private providers offering mostly ambulatory care and medical goods. Its main components are:

- 2 general referral hospitals (Mahosot with 450 beds, and Friendship with 150), 1 military hospital (450 beds) and a few specialized referral hospitals (with 20-100 beds each);
- 18 Provincial hospitals with 45-240 beds (an average of 108 beds);
- 142 District hospitals with 5-30 beds (18 on average), implemented in rural areas since 1992;
- 565 local Health Centres, health posts and dispensaries (with 3 beds each on average);
- Vertical programs funded – and often managed – by donors (multilateral, bilateral or NGOs), most of which have a relatively narrow focus (Malaria, PHC, EPI, Water and Sanitation, Health Education, Tuberculosis control, Leprosy control, Blindness prevention, MCH, HIV/AIDS, Nutrition). NGOs also provide some drugs, mostly free of charge. These programs are not well integrated and their operation often bypasses the MOH structure;
- Private pharmacies (over 1,700 registered pharmacies in 1994, along with an unknown number of unregistered ones), allowed to sell a certain number of drugs on the market but not well regulated, are increasing in numbers and rely increasingly on imported drugs; they are responsible for distributing 80% of the drug consumed in the country;
- Private medical practice, allowed to operate from 1990, is still small but growing (62 in 1993, 71% of which in Vientiane), mostly concentrated in Vientiane; private clinics are usually operated by physicians or nurses that also hold a public job; no private hospitals are operational yet, even though they have recently been allowed.
- Traditional practitioners (around 300 in 1992), including herbalists (monks and village healers) and non-herbalists (akin to shamans), are very common and widely used because of the ethnic diversity and remoteness of certain areas; there is an ongoing effort to integrate these practices within the formal health sector.

Such diversity of providers is compounded by a variety of financial arrangements to result in a quite complex structure of the Lao health sector. Integration and coordination of these schemes is in progress, but still very incipient.

9.3 OVERVIEW OF FINANCING SOURCES AND PATTERNS

There are different ways of classifying and analysing financial patterns in the health sector. The first is by original sources of funds, which are basically: government (through tax revenues), households (through direct payments to providers, including user fees paid at public facilities), and private corporations. Another perspective focuses on who manages and allocates funds, that is, on the intermediate institutions responsible for channelling those resources. A third possibility is to look at the institutions in charge of using or spending financial resources. Finally, from a resource allocation perspective, one can look at how resources are allocated, or spent, to different purposes. These different criteria can be integrated in one general framework which is becoming increasingly useful and popular, called the National Health Account. In this preliminary report, we attempt to describe national expenditure on health by source and use of funds.

During the 1990's total health expenditure increased from US\$ 38 million in 1992-93 to US\$ 51 million in 1994-95 and US\$ 72 million in 1997-98. In per capita terms, it went from US\$ 8.54 to US\$ 14.94². This is quite low by international standards (US\$ 40 for developing South and East Asia excluding India and China, US\$ 21 for these countries³), and is hardly enough to pay for a package of basic health services.⁴ More than half of this corresponds to households' out-of-pocket expenditure, most of which goes to purchase of drugs in the private sector. The country is heavily dependent on foreign aid (about ¼ of the total), and government expenditure usually constitutes the smallest part (Table 9.1 and Figure 9.1 and 9.2). While spending by households and international donors have increased throughout the period, direct spending by the Ministry of Health was reduced and is now at its lowest point in years.

9.3.1 Public Expenditure

Total Government Expenditure (TGE) has been around 20% of GDP for most of the last decade, 2/3 of which is spent at the central level. Government expenditure on health (i.e. financed by the government's treasury) has varied significantly in the last two decades: it represented 4-5% of Total Government Expenditure in the mid-1980's, fell following the implementation of the New Economic Mechanism (1989-1991) to 1-2% of TGE, began to climb back to 3-4% in 1992-96, and declined again with the Asian crisis to less than 2%.

² In current US dollars.

³ World Health Organization: *The World Health Report 2000 – Health Systems: Improving Performance*. WHO, Geneva, 2000.

⁴ World Bank: *World Development Report 1993 – Investing in Health*. The World Bank, Washington, 1993.

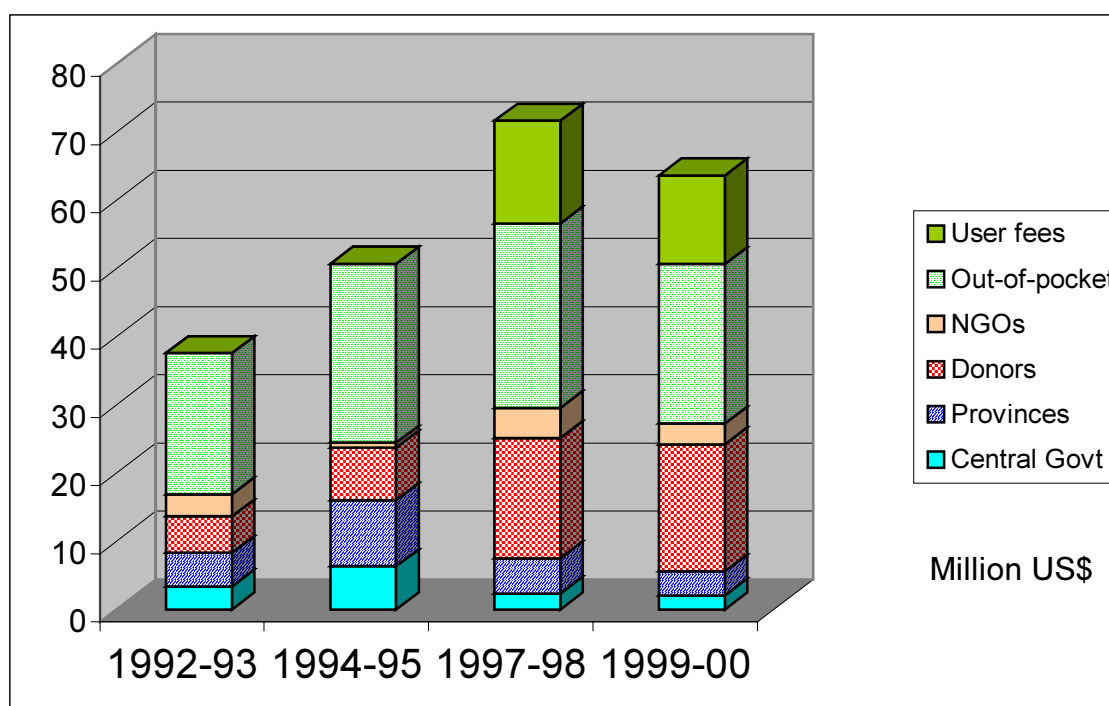
Government Health Expenditure also represents a low proportion of GDP: it is always less than 1%, and fell to less than 0.5% in the aftermath of the Asian crisis.

Table 9.1 Health Expenditure by Source

SOURCE	1992-93	%	1994-95	%	1997-98	%	1999-00 ¹	%
Government ²	8.40	22.1	16.30	31.6	8.31	11.5	5.55	9.0
> Central MOH	3.33	8.7	6.33	12.5	2.31	3.2	1.54	2.5
> Provinces	4.95	13.0	9.70	19.1	5.20	7.2	3.49	5.7
Donors & NGOs	8.61	22.6	8.43	16.6	22.05	30.4	21.69	35.2
> Donors	5.36	14.0	7.70 ³	15.2	17.64	24.3	18.63	30.2
> NGOs	3.25	8.5	0.7 ³	1.4	4.40	6.1	3.06	5.0
Households	20.68	54.2	26.21	51.7	42.09	58.1	34.30	55.6
> Out-of-pocket ⁴	-	-	-	-	27.02	37.3	22.09	35.8
> User fees ⁴	-	-	-	-	15.07	20.8	12.21	19.8
Total (National)	38.18	100.00	50.68	100.00	72.45	100.00	61.63	100.00
Total per capita	8.54	-	11.26	-	14.94	-	11.81	-

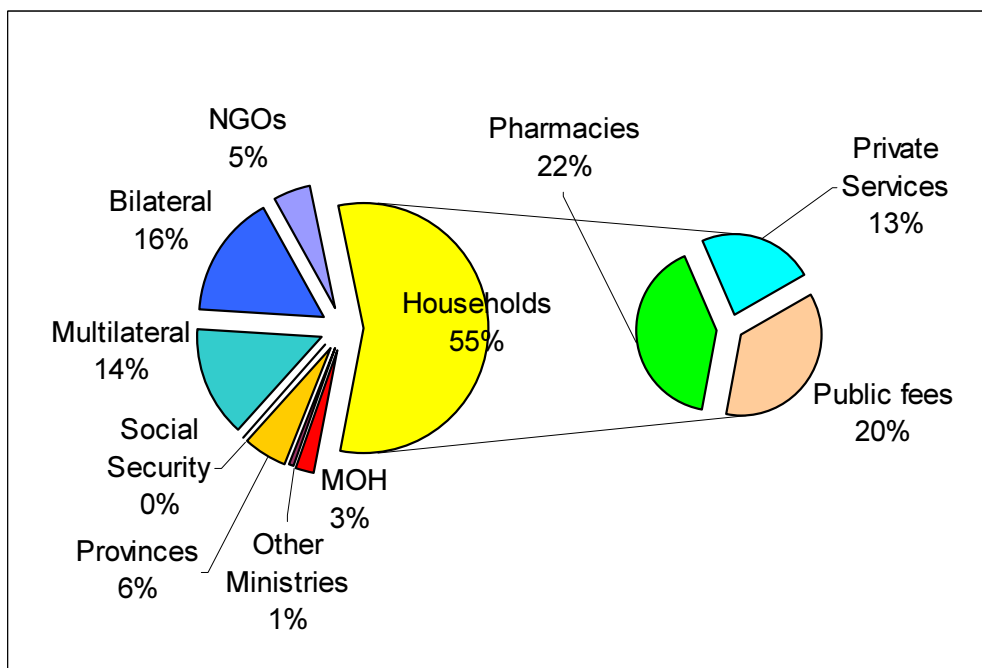
Sources: SPC/NSC, LECS 1992-93 and LECS 1997-98; Holland et al. 1995; World Bank, 1997; ADB 1999a.
Notes: Data in current US\$, converted at average official exchange rates for the fiscal year. ¹ Preliminary estimates from the author based on projections and partial data. ² Government also includes other ministries. ³ Data for 1995-96. ⁴ 'Out-of-pocket' refers to payments to private provider, while 'User fees' refers to payments at public facilities under recovery cost system.

Figure 9.1 Trend and Composition of Health Expenditure



Source: Table 9.1.

Figure 9.2 Composition of Health Expenditure in Lao PDR



Government Health Expenditure (GHE) is mostly the responsibility of the MOH and (following the decentralization process) provincial governments, which are expected to follow MOH sectoral strategies and goals. Central MOH accounts for 28% of GHE and provincial governments for 63%, while the remaining 9% corresponds to health care provided to the police and armed forces (through the Ministries of Interior and National Security), and to the Social Security scheme covering civil servants (see its description in 9.3.4). The proportion of the MOH used to be much larger – about 2/3 – during the centralization days of the 1980's. It has decreased throughout the 1990's, reflecting the movement toward increased decentralization (see Table 9.5). No data could be obtained at this point regarding the proportion of provincial spending on health that is financed by its own revenues.

Capital expenditure (mostly construction) traditionally accounts for an important part of GHE and has increased in the last years to reach 30-40% of GHE; personnel (29%) and administration (26%) account for most of the rest. In addition, almost half of expenditure at the central level goes to the central referral hospitals, and about 1/3 to research and education activities undertaken at central institutes, universities and schools.

At the provincial level, it is usually personnel that represents the largest expenditure item (59% in 1997-98), followed by capital expenditure (17.5%) and administration (11.3%). Overall, expenditure with personnel (salaries and social welfare) accounts for the larger part of government expenditure on health (around 50%). If expenditure by both government and

international donors are taken into account, then capital expenditure in the public sector represents more than half of total expenditure in recent years, partly as a consequence of a deliberate effort at revamping and expanding the facility network (see Public Investment Plan 1995-96/1999-2000 below). However, more detailed information is needed to clarify the relationship between recurrent and capital expenditure at the sectoral level and the implications current capital expenditures have on future operating costs.

Table 9.2 Government Health Expenditure by Line Item (MOH & Provinces)

Line Item	1992-93	%	1994-95	%	1997-98	%
Salaries	1,959	32.1	-		6,052	38.7
Allowances & Indemnities	978	16.0	-		1,722	11.0
Subtotal Personnel	2,937	48.1	6,684	57.1	7,774	49.8
Administration	862	14.1	1,538	13.1	2,479	15.9
Drugs	582	9.5	1,105	9.4	-	-
Other recurrent	-	-	769	6.6	1,541	9.8
Subtotal Recurrent	4,381	71.7	10,096	86.3	11,794	75.5
Subtotal Capital	1,727	28.3	1,605	13.7	3,832	24.5
Total	6,108	100.0	11,701	100.0	15,626	100.0

Sources: World Bank, 1997; ADB, 1999a.

The Lao government recently started using a budget classification by purpose, which distinguishes five main programs: Protection & Promotion (preventive services in general), Treatment & Rehabilitation (mostly curative care), Human Resource Development, Consumer Protection (including food and drug control), Medical Research, and Administration & Management. Data available for recent years indicate that 15-20% of the budget goes to Protection and Promotion, about 35% to Treatment & Rehabilitation, 9-10% to Human Resource Development, and 30-40% to Administration.⁵ However, because personnel expenditure is not disaggregated by program or function, it is not really possible to know the functional distribution of MOH expenditure at this point.

9.3.2 Private Expenditure

For analytical purposes, household expenditure on health can be separated in two main components: direct, out-of-pocket, payments to private providers of services and goods, and payment of user fees to public facilities, the latter being a source of financing to the public sector. From the 1997-98 Lao Expenditure and Consumption Survey (LECS II), Lao households spent about 4,246 kip per month on medical care, representing 2.2% of total consumption (compared with 2.3% in 1992-93) but 3.7% of household monetary

⁵ World Bank: *Lao PDR Public Expenditure Review: Improving Efficiency and Equity in Spending Priorities*. Human Resources Operations Division, Country Department I, East Asia and Pacific Region. The World Bank, Washington, 1997. Lao Government: *Public Investment Project 1995-96/1999-2000*; Vientiane, 2000.

expenditure.⁶ This amounted to 18,080 kip per capita per year or US\$ 6.70 (once adjusted for inflation and to coincide with the fiscal year).⁷

The major part of this spending goes to the purchase of drugs (92%), while 4.4% go to the payment of user fees and private services. The ADB survey⁸ gives comparable figures, but was not representative of the whole country: drugs accounted for 85.7% of the total health expenditure, user fees for 13.1%, the remaining going to medical consumables, admission documents and others. Total health expenditure amounted to 33,056 kip per month, or US\$ 7.50 per capita per year (see Table 9.4).

When compared across regions, data show that on average, households located in the Central Region (which also happens to have higher income levels) spend more in absolute terms (4,616 kip) than those in the Southern Region (4,075) and the Northern Region (3,806). However, urban households and those without access to a road tend to spend more (6,030 and 3,863 kip respectively) than the average Lao household (5,582 and 3,513 kip, respectively). Even larger variations are found between provinces.

Table 9.3 Summary of the Lao Expenditure and Consumption Surveys

Expenditure Item	1992-93	Urban	Rural	1997-98	Urban	Rural ¹¹	Rural ²¹	1999 ²
Total Consumption	84,920	121,800	71,400	189,319	295,457	191,066	149,080	-
Total Expenditure	56,640	105,000	36,400	114,218	244,700	110,378	69,319	-
Total Exp /cap in US\$	24.56	-	-					-
Own produced food	38.0%	14%	49%	33.9%	9.2%	37.1%	33.9%	-
Food expenditure	26.3%	40%	17%	26.9%	41.4%	24.3%	26.9%	-
Health Care	1,900	2,400	1,800	4,246	5,582	4,566	3,513	33,056
Health Care % T. Cons.	2.3	2.0	2.6	2.2	1.9	2.4	2.4	-
Health Care % T. Exp.	3.4	2.3	4.9	3.7	2.3	4.1	5.1	
Drugs	-	2,300	1,800	3,921	4,733	4,219	3,396	28,317
Services & User fees	-	50	-	188	548	211	39	4,346
Other	-	-	-	138	301	136	78	393

Sources: MOH, LECS 1992-93 and LECS 1997-98. Monthly household expenditure. ¹ Rural1 means rural households with access to a road, and Rural2 those without such access. ² ADB, 1999b.

The ADB data also show that 64% of household expenditure on health went to private providers and pharmacies, and 36% to the public health system. It is not known whether this proportion has been stable or not, because two simultaneous trends happened during the 1990's: the generalization of user charging in public facilities, and the rapid growth of the

⁶ Excluding own-produced food, imputed rent and fetched firewood.

⁷ Asian Development Bank: *Feasibility Study – TA NO 3058-LAO – Laos Primary Health Care Expansion Project*. Asian Development Bank, November 1999a.

⁸ Asian Development Bank: *Household Survey in 11 Provinces of Lao PDR*. Project Preparatory Technical Assistance (PPTA), The Primary Health Care Expansion Project (ADB TA No. 3058-Lao), July 1999b.

private sector, especially pharmacies. 59% of the drugs were purchased from private pharmacies (48%) and clinics (11%), and only 41% was spent at public facilities. In addition, almost all service fees paid to the private sector went to religious and traditional healers, and in spite of the existing and widely used cost recovery system in public facilities, only 1% of payments for services were made at public facilities. This is surprising, because user charges have been collected in hospitals for several years (mainly for drugs, and consumables or some amenities, under various schemes) in an informal and unregulated way. The policy was upgraded and expanded in 1992 and further formalized in 1995 with the publication of Decree 52/95 and of implementing guidelines. In 1994 it was already a widespread practice: 70% of hospital users and 50% of health centres users bought most or all of their medications.

Cost recovery includes the payment of fees for services provided at public facilities and fees paid for drugs within the Drug Revolving Funds framework. There are two main differences between these two practices. First, DRFs are usually started with an initial endowment by the government, an international donor or NGO, and user fees are charged thereafter to replenish the drug stock; second, revenues from DRF can only be used for the replenishment and administration of the funds themselves. User fees usually are fixed at 20-25% over the purchasing price at central and provincial hospitals, 10-15% at district hospitals, and 5-10% at health centres and villages. This level of fees is normally not enough to cover the total cost of providing the service or medical good, which includes administrative and logistic costs. According to the regulation, 20% of the fee revenue at central and provincial hospitals must be returned to the Ministry of Finance, 80% being retained at the facility.

Cost recovery accounts for an important part of total revenue at a sample of public facilities surveyed⁹: around 60% in central and provincial hospitals, which charge fees for drugs, consumables, exams, documents and rooms; and around 33% in district hospitals, which only charge for drugs (like health centres and villages). 77% of revenue in central and provincial hospitals come from drug sales, 10% for treatment fees, 9% from diagnostic tests, and 4% from other sources, mainly documents. At district hospitals, more than 90% comes from the DRF, with most of the remaining coming from diagnostic tests. An analysis of the effect of Cost Recovery on total hospital revenue revealed that in most cases, budget revenue has decreased in real terms, but revenue from user fees increased enough to offset this reduction, so that total revenue increased.¹⁰

Exemptions are given to 58% of patients at national and provincial hospitals, and to 10-15% of patients at district and sub-district facilities.¹¹ This is done through an informal evaluation system and a practice of case-by-case negotiation which appears to actually protect the poor. This has been cited as an indication of the potential for expanding the user fee system and

⁹ ADB, 1999a, op.cit.

¹⁰ ADB, 1999a, op.cit.

¹¹ MOH, 2000, op.cit.

other financing schemes.¹² However, the implications of relying too much on user fees for financing a public health system in a country like Laos need to be assessed.

9.3.3 International Sources

Donor spending represents an important proportion of health expenditure in Laos. It is usually difficult to classify it by purpose or type of service provided. But it normally falls into one or more of 4 categories: technical assistance, general construction and vehicles, medical equipment and pharmaceuticals, and study fellowships and tours. Traditionally, more than ½ of international assistance goes to investment, and about 30% to the procurement of drugs¹³, although these proportions may vary significantly from year to year.

Total donor assistance in 1998 was 13.7 million dollars, 37% of which coming from multilateral agencies (especially the World Bank, the Asian Development Bank, UNICEF and WHO), and 63% from bilateral assistance (the largest donor countries in that year were Sweden, the European Union, Australia and Japan). Overall, donor assistance represents 24.4% of total health expenditure in Lao PDR.¹⁴ This is roughly twice the amount given in 1991 (6.34 million US\$, of which 64% was multilateral and 36% bilateral).

There are about 54 active international NGOs in Laos. Their expenditure in the health sector amounts to 3.4 million dollars, or 6.1% of total expenditure on health. This was 40% over 1991 levels (2.42 million US\$). Overall, the proportion of NGO funding in Lao PDR has declined as multilateral agencies become more involved in the country.

The large number of international agencies and NGOs, their emphasis on vertical programmes aimed at particular diseases, and the fact that many of their projects bypass the structure and management of the Ministry of Health, make it quite difficult to assure some reasonable coordination among these efforts, and between these programs and MOH policies and activities. As in many developing countries, donor coordination has been suggested and discussed frequently, but much remains to be done in that area.

9.3.4 The Public Investment Plan

The first Public Investment Plan (1991-95) was a rolling five-year investment programme intended at “ensuring increased coherence by avoiding overlapping and competing investment interests, [...] make the line ministries aware of their development responsibilities, [...] orienting progressively foreign assistance towards nationally owned priorities, and [...] improved accountability.”¹⁵ While actual spending for the 1st PIP was slightly larger than

¹² ADB, 1999a, op.cit.

¹³ Vinard P.: *Le Financement de la Santé en RDP Lao*. Ministry of Health, Groupe de Travail sur la Réforme du Financement de la Santé. Vientiane, 1993.

¹⁴ ADB, 1999a, op.cit.

¹⁵ Government of Lao PDR: *Socio-Economic Development and Investment Requirements 1997-2000*.

planned (534.3 billion kips against 533.4), domestic funds participation was much smaller than planned and amounted to Kip 111.2 billion or 20.7% of the total. Agriculture, Industry and Transports & Communications accounted for 84% of PIP, while Education and Health were particularly affected by the shortfall in domestic funding.

Table 9.4 Planned Public Investment Plan for Health

Item	1995-96	1996-97	1997-98	1998-99	1999-2000
Ongoing & committed	8.0	1.9	0.9	1.0	1.0
> Basic Health Services	0.7	0.6	0.7	0.7	0.8
New programs	7.4	17.2	22.4	27.7	33.5
> Malaria Control	3.4	5.4	7.8	8.4	7.7
> MCH, Vaccin., Nutrition	1.2	3.3	3.9	3.6	3.9
> Water & Sanitation	-	2.2	3.4	4.8	7.8
> Hospital & Curative	-	1.1	1.1	3.6	6.4
> New Rural Upland programs	2.9	5.4	6.2	7.2	7.7
Total PIP for Health (1)	15.4	19.1	23.3	28.6	34.5
>Government financed (2)	2.7	3.7	5.4	7.6	9.9
>Foreign financed	12.7	15.4	17.9	21.0	24.6
Current Govt Health Expend (3)	10.1	15.0	20.0	26.0	34.0
Total Exp. Committed (1+3)	25.5	34.1	43.3	54.6	68.5
Total Govt commitment (2+3)	12.8	18.7	25.4	33.6	43.9
Total Exp. Com. / Total Govt Exp	6.9	7.4	8.1	9.1	10.4
Total Exp. Com. / GDP	1.6	1.8	2.0	2.2	2.5

Sources: World Bank, 1997 and Government of Lao PDR, 1997.

The 2nd PIP covered the 1995-96/1999-00 period and continued to improve the planning process and coordinate international aid with local investment efforts. It defined ambitious goals in terms of funding increase, both from the Lao government and donors (see Table 9.4). When allocation for recurrent expenditures was added, public spending on health was supposed to go from 12.8 to 44 billion kip, an increase of 240% in real terms over the 4-year period. The PIP also defined a nearly doubling of donors funding, which was supposed to finance 77% of the programmed investment. Overall, total health expenditure was supposed to increase to 2.5% of GDP and 10.4% of the public budget. Investment in the social sectors was expected to reach 26.6% of the total. In fact, implementation of the plan was significantly lower than planned, and social sectors had their participation reduced. As an additional 415.5 billion kips (or 80 million dollars) are planned for health over the next three years (2000-01,

2001-02, 2002-03)¹⁶, it is important to analyse how the PIP was implemented and the difficulties that arise in plan implementation. This is done in Section 9.4.2.

9.3.5 Health Insurance

Even though health insurance – and insurance in general – is relatively new to the Lao PDR (the first private insurance company, a subsidiary from AGF of France, was allowed to operate in 1990), several schemes are being implemented or planned, which can be classified in three main types: the social security system covering public servants, health insurance schemes under implementation for private sector, and community-based options for health insurance.

The establishment of a social security system in Laos has been under discussion for several years, and was the object of a long-term project supported by international donors. Its Phase I, which went on until 1995 and was supported by ILO, resulted in the establishment of the system for government employees. Its Phase II, with technical assistance from UNDP and the Belgian Technical Cooperation, lasted between 1998 and 2001. Its main product was the definition of a social security system for the private sector. Phase III is currently under negotiation.

1) Civil servants scheme

A pension and social security fund for civil servants was started in 1993 (Decree 178/PM and Implementing Guidelines 2282/ML&SW) and is managed by the Ministry of Labour and Social Welfare, through its Social Security Department. It provides social benefits – retirement pension, invalidity benefits, survivors' benefits, employment injury and sickness benefits, maternity benefits and severance payments – as well as medical coverage to government personnel and their families, through a reimbursement scheme. However, when the employee does not have the financial resources to pay for the medical expenses incurred, a negotiation takes place with the administrative unit employing him/her, which may result in that unit making the payment and receiving the reimbursement.

The system is supposed to be financed by a 6% contribution deducted from civil servants' salaries, but this has not been sufficient to cover year-to-year outlays. Additional funds come from the government's treasury as needed and depending on treasury availability; no fixed budget or rules have been defined regarding the government's contribution to the scheme.

Several other problems have been identified in the Social Security system, including the lack of information among government personnel regarding their rights and how to file a claim, excessive time required to process and pay claims (several months), and low reimbursement rates due to outdated schedules, high inflation and budget constraints. Monitoring and control

¹⁶ Government of Lao PDR, 2000, op.cit. Government of Lao PDR, 1997, op.cit. and World Bank, 1997, op.cit.

is very weak, as very little information is available (at the ML&SW level) on the number of cases presented for reimbursement, or the number of cases actually reimbursed.

This lack of information seems to be at least in part due to the distribution of responsibilities between the Social Security Office in the Ministry of Labour and Social Welfare (which runs the system and processes claims), the Ministry of Finance (which makes the disbursements), and the provincial Finance Departments (which receive the claims, consolidate them and send them up to the ML&SF). It is known that some fraud does occur, with claims made without any care having been provided, but no information exists on the extent of it and the amount involved.

In 1994-95, retirement and other social benefits accounted for most of the expenditure, while health care reimbursements represented only 3.4% of the total.¹⁷ Even though it appears that the 6% contribution has been really set too low (in many developing countries with an established social security system, contributions from employers and employees add up to a much higher proportion of payroll), recently established social security schemes, where full retirement benefits are only secured after a number of years (25 in Laos) in public service, usually do not need large contributions to maintain themselves in the initial years. Some actuarial and financial analyses would be needed in order to better identify the reasons for the current situation and propose feasible improvements.

2) Private sector scheme

The establishment of a social security system for employees in the private sector has been provided for in the Labour Act of 1994 and the Social Security decree. As a result of Phase II of the Social Security Project, the decree regulating its inception and functioning was published in December 1999 (Decree 207/PM). A separate Social Security Organization (SSO) was recently formed (June 2001), with a board formed by representatives from the government, employers and employees. The system is compulsory for enterprises with 10 or more employees, and the coverage target is 100,000 people. It is funded by a 4.5% contribution from employees and a 5% contribution from employers, and is supposed to be balanced within three years.

Since the feasibility of health insurance depends very much on the size of its pool, a key issue regarding this system is the size of the population that could be covered, especially in a country such as Laos where the majority of the population lives out of subsistence agriculture and the formal private sector is still very small. Another issue seems to be the technical and managerial capacity to run the system, which appears limited in the case of the civil servants scheme. Finally, it should be noted that initial reaction to this scheme has not been positive, as both employers and employees seem to resist the very idea of compulsory insurance.

¹⁷ World Bank, 1997, op.cit.

The system is under implementation initially in Vientiane Municipality, where subscribers will have a choice of three main hospitals – Mahosot, Friendship and Sethathirath. Payments to health care providers are on a capitation basis and limited to a defined set of services. Actual rates were negotiated with the hospitals and the MOH and fixed at 35,000 kip, and the corresponding amount would be transferred to particular hospitals quarterly, based on an annual contract. Since this is a prepayment system, users will not have to pay for the care they receive. As of September 2001, 35 enterprises with 5,000 employees were covered, and an additional 60 were registered.

It is known that some private companies and other institutions, especially subsidiaries of international corporations, already offer health care coverage to their employees, either through in-house services, or payment of health expenses in Laos and/or abroad. AGL also offers premium health insurance mostly for expatriates. However, no systematic information exists at the moment regarding these practices and their importance.

3) Community-based health insurance

Proposed since 1997, the establishment of community-based health insurance is presently the object of a Ministry of Health initiative aiming at implementing three pilot plans in the Sethathirath, Luangphabang and Champasack districts. The project involves technical assistance from WHO and is in its early stage. It is supposed to cover people working in the informal sector and their families. A survey to be conducted in the coming months will help identify the households that could participate and certain aspects of the future scheme. It will cover only a pre-defined set of medical care services. The facilities operating as referral providers – a set of hospitals and health centres – will be paid on a capitation basis at a rate yet to be determined. To coordinate this initiative, a Community-Based Health Insurance Division was recently created in the MOH structure, under the Department of Planning and Finance.

Another type of community-based health insurance has been operating in fact for some years in many villages. Many Lao villages have a mutual fund that can be used to obtain small loans for starting or expanding a home business. Most of these village funds may also be used to cover major health care expenses. This is evidence of an informal, village-based, health insurance covering catastrophic illness, but little information is available about its workings and how it can be used for health expenses.

In spite of this widely available mechanism, according to the ADB study¹⁸, only 2% of the households surveyed were reimbursed – by any scheme – for payments made to providers. 24% of these received reimbursement from Social Security, 14% from employers, 2% from private health insurance plans, and 60% from other sources (possibly including village mutual

¹⁸ ADB, 1999b, op.cit.

funds). On average, the amount reimbursed was 132,000 kip (193,000 for Employer, 105,000 for Social Security, 43,000 for private insurance, and 133,000 for other sources). This 2% figure seems low when compared with the proportion of villages with mutual funds covering catastrophic illness (29% in the sample) and the proportion of households reporting at least one such illness (31%). This indicates that although various kinds of health insurance schemes already exist, they are not widely used. This might suggest some reluctance to use loans or adhere to any insurance scheme from the part of rural households. But much more information is needed before this hypothesis can be verified, and clear conclusions can be reached on the potential of village mutual funds as a form of community-based health insurance.

9.4 ISSUES IN HEALTH FINANCING

This section presents some of the main issues identified so far that will need to be further analysed in the following phases of the project.

9.4.1 Level of Financing

Determining the adequate amount of finance for the health sector is a difficult and inglorious task. One reason is because there is no consensus on what is the “right” level of resources for a particular country, or how to determine it. The other is that many factors influence the amount of money each country is willing and capable of mobilizing for the health sector. Government resource availability (which depends on its capacity for raising taxes), the country’s politically and socially-defined priorities, households’ willingness and capacity to pay (which depends on their total income and preferences and the price structure they face), are among the main factors. Even though the decision of how much to allocate to health is, in the end, essentially political, a good technical assessment of the country’s health needs, priorities and strategies is necessary to feed the decision process.

There is no doubt that government expenditure on health has been low relative to international standards and to the country’s stated goals in health. However, determining the amount to be spent by the state on health depends on several variables in addition to those mentioned above, such as the capacity of the state to raise revenues, the size and features of the private sector, the importance and nature of the main health problems, and the level of efficiency and effectiveness that can be reasonably expected from public expenditure. Because of that, countries with very different levels of health spending manage in fact to achieve similar levels of health indicators (China and Brazil, Laos and Vietnam, are some examples).

Determining the amount of funding needed is one side of the question; the other side is to determine how much funding can be reasonably expected to be mobilized. Since the amount of resources is always limited, not all activities and interventions can be funded; this means that difficult choices have to be made, and trying to put a little money in everything often

leads to ineffectiveness and waste. On the other hand, determining a target level for public health expenditure should not be done without consideration of the role, characteristics and potential of the private sector, because it is the overall amount of resources available to the health sector that is important, and not just government expenditure.

Defining a reasonable level of public finance for the health sector will therefore need to take into account all these factors. Two additional issues are related to budgeting public expenditure on health: the feasibility and sustainability of the proposed level of funding, and the efficient allocation and use of the available resources. We discuss shortly these topics in the following sections.

9.4.2 Sustainability

The recent history of the health sector in Laos should recommend caution in estimating the amount of resources the government should, and can, allocate to health. As seen above, the level of public funds has varied widely in the last two decades, depending on the general macroeconomic situation and on changing priorities by the central government. A preliminary analysis of the 2nd Public Investment Plans suggests that government expenditure on health fell significantly short of the amount planned, due to these very reasons. Table 9.5 presents preliminary figures.¹⁹

It shows that when converted to constant kips or dollars, cumulated actual PIP expenditure on health was around 50% of the planned amount. The major shortfall occurred in Government spending, which was 1/3 of the planned amount in US dollars (US\$ 10 million against 29 million). Some of this was probably due to the consequences of the Asian crisis, which led to a contraction of public spending in 1998. However, the main reason seems to be a redistribution of the PIP resources toward infrastructure: the proportion of social sectors in the PIP was 26.6% in the initial allocation, but only 16.4% in the actual cumulated spending. The health sector share was reduced from 8.1% to 5.4%. When only government expenditure is considered, the health sector share went from 7.34% to 3.14%.

Even with this reduction, however, health spending in the PIP was significantly higher than its share on the government budget in general in each year of the plan. This indicates an effort to increase public health spending that could not meet initial expectations. It also suggests that these expectations for the health sector could not be met in face of the country's investment needs in other sectors. This in turn recommends great caution and realism in estimating the amount of resources that can be reasonably expected to be available for health in the coming years.

¹⁹ These figures will be confirmed when actual budget data are available.

Table 9.5 Implementation of the Public Investment Plan 1995-96/1999-00

	Planned Total	Actual 1995-96	Actual 1996-97	Actual 1997-98	Actual 1998-99	Actual 1999-00	Actual Total
Total PIP	1,500.00	205.47	264.35	589.60	908.17	1,701.00	3,668.59
Of which: Government	397.78	47.71	78.94	154.00	204.91	506.00	991.56
Social Sectors	398.88	42.33	43.99	102.80	99.59	313.87	602.58
Health Total	120.94	13.83	9.25	34.40	30.09	109.25	196.82
Health Govt Expenditure	29.21	2.63	3.58	3.50	8.22	13.20	31.13
Health Donors Expend.	91.73	11.20	5.67	30.90	21.87	96.05	165.69
Health Total in 1995 kip	113.34	12.96	7.51	17.03	6.20	16.02	59.72
Health Total in 000 US\$	128.10	14.65	8.19	11.99	4.34	13.84	53.01
Of which: Government	29.21	2.79	3.17	1.22	1.19	1.67	10.04
Of which: Donors	91.73	11.86	5.02	10.77	3.15	12.17	42.97

Source: Government of Lao PDR, 1997 and MOH, 2000.

Another major cause for concern regarding financial sustainability is the balance between capital and recurrent expenditures. In the past, capital accounted for a large proportion of government health expenditure (between 20 and 40%), while most existing facilities were left with little resources to finance their operation. This results in low quality of care, lack of maintenance, and by consequence low utilization rates and a very inefficient use of resources. This pattern is maintained in the 2nd Investment Plan; furthermore, ambitious goals have been defined for the middle and long runs, which imply heavy investment in construction and equipment. Building and equipping facilities while not maintaining them is in fact a very wasteful use of resources. Without proper maintenance, facilities and equipment tend to deteriorate very rapidly, and often become unusable in a few years. Facilities without adequate staffing and operational funding can easily become ineffective and abandoned by users, as the current situation in several MOH and provincial facilities clearly demonstrates.

Access difficulties have often been pointed to as a major problem in the Lao health system, and as an important reason for low utilization of many facilities. Further analysis is required in order to assess whether physical access remains a major issue – in which case an expansion of the network would be necessary – or if the main problems lie in the quality and effectiveness of care and/or cultural accessibility; in this case, an emphasis on improving existing facilities rather than expanding the network would be warranted. In any case, the financial and human resources and managerial capacity of the public sector appear to be already stretched over existing facilities and programs. Putting more pressure on recurrent funding by expanding the network further may not be sustainable, and the balance between capital and recurrent budget should probably be defined at more conservative levels.

The other source of concern over the long run relates to the extent and role of international donors in the health sector. While the resources brought by these institutions no doubt help

confronting the main health problems in the country and compensate for the limited public resources, they pose a problem in the medium and long term: who will pick up the bill for their projects once donor contribution recedes, or when the implementation phase is finished? In planning for the health sector, it is necessary to make sure that current or new projects and programs are sustainable in the long run, which means that the government needs to make sure that national resources – whether public or private – are available to cover recurrent and maintenance costs in the future. In this regard, the 2nd PIP appears overoptimistic in assuming that – or not considering whether – sufficient resources will be available in the coming years for operating the infrastructure currently under construction or renovation.

9.4.3 Resource Allocation and Efficiency

While government spending on health is not commensurate with its stated goals, efficiency problems are pervasive in the Lao health sector. According to existing information, poor quality and effectiveness of services lead to low utilisation rates in many public facilities, which means that resources spent at lower-level facilities are often unused and thus wasted, and a significant proportion of personnel is unproductive. The public network does not really work like one; users tend to go to a higher level hospital whenever there is one nearby, and no referral system operates between the different levels of care. Health centres do not function as the entry door to the modern health care system, and are often functional only when they are supported by a donor project. Personnel allocation, both geographical and by facility, does not correspond to needs; better trained staff usually works at the central level institutes and hospitals, and training and qualification for personnel in many provinces and especially at the district and local levels is inadequate.

The Ministry of Health is well aware of these weaknesses (see the Strategy up to the Year 2020, for example), and has been adopting policies and strategies for improving this situation, such as training, integration of modern and traditional practices, improvement in access, and increasing resource availability through user fees. However, structural problems – such as low salaries in the public sector – has so far limited the effectiveness of these policies. A better understanding of why individuals choose one provider over the other, a careful balancing in resource allocation, and the identification of inexpensive strategies to improve quality at the facility level, can certainly help this process.

It is a common conclusion that the public health system is under funded in relation to the population's needs and the government goals, but addressing these inefficiencies, better targeting, careful prioritisation, and making better use of existing resources would go a long way in improving the effectiveness of the health system. There is certainly room for improving effectiveness and efficiency through a more careful process of resource allocation and prioritization.

9.4.4 Equity

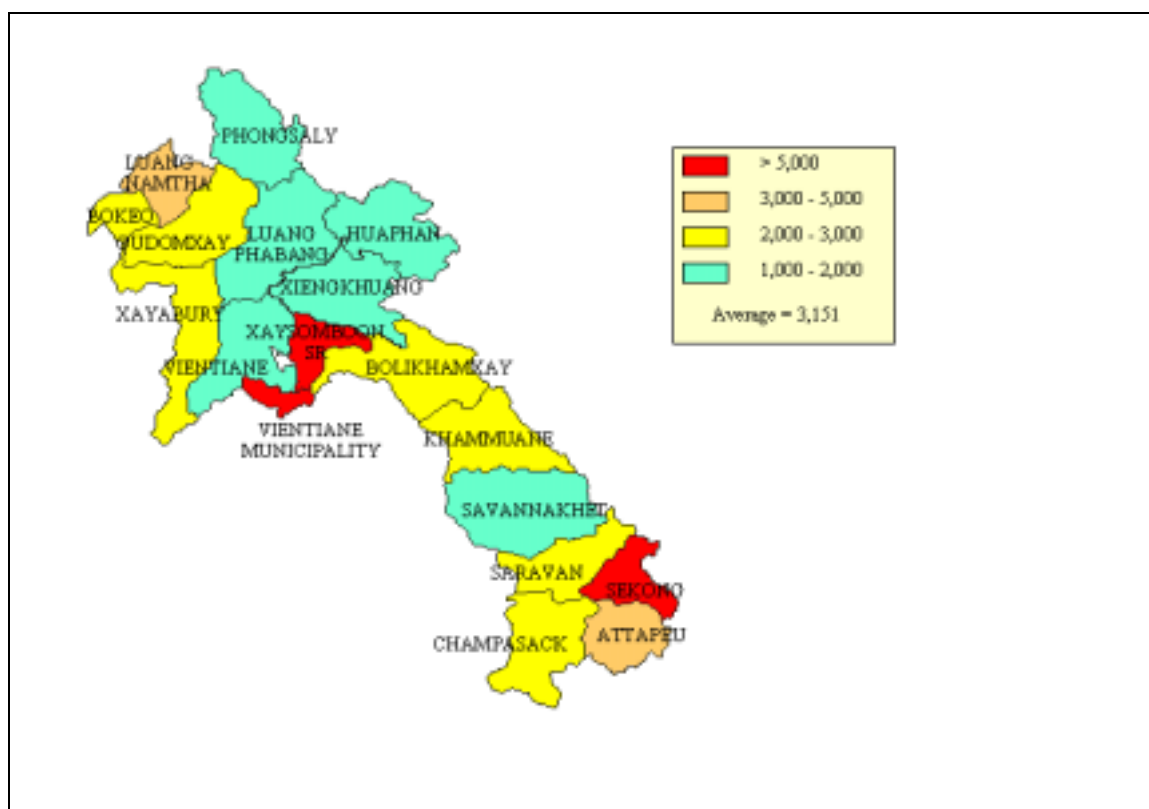
In spite of the Lao government's concern with equity and securing access to health services by all population groups, inequalities in the access to, the utilization of and the financing for health services remain important. Some preliminary remarks are made here, but further analyses of existing patterns and variations are needed before the determinants of household expenditure can be identified and its equity assessed.

The distribution of health resources by province is quite unequal, since physical and human resources are concentrated in better-off provinces, and especially in the capital. However, the provincial distribution of government expenditure on health is more equitable than general tax revenue or household income (see Table 9.5 and Figure 9.3): with the exception of expenditure at the central level, the ratio between low-spending and high-spending provinces was 3.2 in 1992-93, 2.4 in 1994-95, and 3.8 in 1997-98 (the ratio for tax revenue per capita is over 10). Also, the provinces with higher expenditure per capita are often among the poorest, suggesting a real concern toward reducing inequalities in health. But the recent and ongoing changes in the budgeting process and wide differences in managerial capacity (especially in financial management) make it uneasy to ascertain the role of a deliberate effort to redistribute health financial resources.

On the other hand, certain groups appear to be protected relative to the really poor. For example, in two provincial hospitals surveyed, 27% of the patients exempted from fees were students, 26% were monks, 15% were civil servants, and only 32% were exempted because they were poor. In any case, the proportion of exemptions in these hospitals was very low (about 4%), and falling in recent years. The proportion of foregone revenue was around 12% in Luangphabang Provincial Hospital. Civil servants and many employees of public or semi-public organizations and enterprises are covered by a social security scheme, while at the same time being exempted from the payment of most fees. On the other hand, the really poor in rural areas often seem not to venture in modern public facilities.²⁰ In some facilities, free drugs appear to be reserved to civil servants.

²⁰ Vinard, 1994, op.cit.

Figure 9.3 Regional Distribution of Public Health Expenditure per Capita, 1997-98



Source: Table 9.5. Figures are in Kip per person per year.

Households' contribution to financing health is also inequitable, as urban households spend a much lower proportion of their budget (2.3%) than rural households with access to a road (4.1%), and those without such access (5.1%) (see Table 9.4). When expenditure patterns are analysed across income groups, wider disparities emerge. Moreover, the government's policy to expand the user fee system has been based on the assumption that most of the households have both the capacity and willingness to pay. But most experiences with cost recovery have taken place in relatively better-off areas, and have had the financial and/or technical support of international donors; the question of whether these experiences can be extended to or replicated in remote or very poor areas as part of a national policy is still not clear. In these areas, the issue of financial access can become a critical one.

Equity issues can also arise in health insurance schemes, as the existence of several different systems aimed at different population groups may result in a two- or three-tiered system in which urban formal workers are covered by a well-funded scheme while people in remote areas are covered not at all or by a hardly functioning system with limited resources. It is probably necessary to think the different possible approaches with some kind of coordination and even some cross-subsidization. In order to assess this, it is necessary to analyse the characteristics of the different groups targeted by the different insurance schemes.

Table 9.6 Distribution of Public Expenditure by Province

Province	GHE 92-93	Popul 92-93	Per Capita	GHE 94-95	Popul 1995	Per Capita	GHE 1997-98	Popul 2000	Per Capita
NORTH	1,232	1,348	914	2,118	1,502.6	1,410	3,617.6	1,620.5	2,232
Phongsaly	170	149	1,141	194.0	153.4	1,301	310.8	165.9	1,873
Luangnamtha	144	125	1,152	156.0	115.2	1,396	511.8	124.6	4,108
Oudomxay	121	188	644	219.0	211.3	1,064	551.9	228.2	2,418
Bokeo	115	104	1,106	288.0	114.9	2,600	362.4	123.3	2,939
Luangphabang	316	355	890	590.0	367.2	1,655	750.2	396.1	1,894
Huaphanh	179	232	772	346.0	247.3	1,439	477.6	265.6	1,798
Xayabury	187	195	959	325.0	293.3	1,142	652.9	316.8	2,061
CENTER ¹	4,007	2,156	1,859	7,953	2,189.2	3,633	9,278.7	2,359.3	3,933
Vientiane Munic.	297	489	607	573.0	531.8	1,112	845.8	569.0	1,486
Xiengkhuang	109	191	571	329.0	201.2	1,685	413.6	217.8	1,899
Vientiane	262	321	816	584.0	286.8	2,092	531.8	311.1	1,709
Bolikhamxay	125	151	828	366.0	164.9	2,289	360.6	177.6	2,030
Khammuane	277	258	1,074	535.0	275.4	2,002	868.1	295.8	2,935
XaysonboonSR		73		-	54.2	-	306.2	58.7	5,216
Savannakhet	427	673	634	946.0	674.9	1,443	1,148.0	729.3	1,574
SOUTH	801	856	936	2,475	1,588.1	1,558	2,729.7	987.0	2,766
Saravane	181	237	764	400.0	258.3	1,597	611.8	278.2	2,199
Sekong	108	59	1,831	135.0	64.2	2,167	394.2	69.7	5,656
Champasack	403	477	845	763.0	503.0	1,560	1,411.3	544.4	2,592
Attapeu	109	83	1,313	231.0	87.7	2,715	312.4	94.7	3,299
Central Level	2,510	1	5,133	4,620	1	8,687	4,804.6	1	8,444
Total	6,040	4,360	1,385	11,701	4,605.3	2,541	15,625.9	5,218.3	2,994
Central % Total	41.6	-	-	36.0	-	-	30.7	-	-

Source: Government of Lao, 2000; World Bank, 1997, Vinard, 1994. ¹ Expenditure at the Central MOH is attributed to the Vientiane Municipality, since it benefits mostly local residents.

9.4.5 Cost Recovery and Drug Revolving Funds

Even though cost recovery has been a government policy for several years and is extensively practiced throughout the public health system, information on its characteristics and operation are rather patchy and non systematic. Recent data is only available for the larger facilities, where revenues from cost recovery are high. Most of the user fee revenue is raised by Drug Revolving Funds, and few facilities raise significant amounts of service fees.

According to a WHO report²¹, by 1997 there were 1,179 Drug Revolving Funds, established at almost all central and provincial hospitals, 63% of district hospitals, 47% of health centres,

²¹ World Health Organization: *WHO Mission Report – Lao PDR Revolving Drug Funds*. WHO Regional Office for the Western Pacific Bureau, Manila, 1997.

and 807 villages (7% of the total), covering 63% of the population. By 2000, coverage had expanded to 12% of the villages, but with wide variations between regions (0 – 28%)²² More recent data show 1,320 DRF, covering 86% of health facilities. However, wide variations exist among provinces, with Bolikhamxay, Luangnamtha, Attapeu, Khammuane and Sekong being the best covered (over 20%), and six provinces having no coverage at the village level.

Table 9.7 Distribution of Drug Revolving Funds by Province and Facility

Province	Provincial hospitals	District hospitals	Health Centres	% of facilities	Village kits	% of villages	1997 fac – vill
Phongsaly	1	6	11	86	0	0	7 – 8
Luangnamtha	1	5	10	100	145	27	18 – 16
Oudomxay	1	6	41	98	25	3	18 – 0
Bokeo	1	5	14	83	10	3	1 – 0
Luangphabang	1	11	45	100	0	0	39 – 6
Huaphanh	1	4	18	85	153	17	7 – 90
Xayaboury	1	10	54	100	0	0	42 – 121?
Vientiane Municip.	1	9	36	100	0	0	36 – 5
Xiengkhuang	1	6	41	98	90	12	18 – 88
Vientiane	1	7	11	83	0	0	25 – 0
Bolikhamxay	1	4	25	94	210	53	24 – 13
Khammuane	1	8	42	86	187	23	18 – 145
Xaysomboon	0	0	6	35	0	0	4 – 0
Savannakhet	1	14	59	74	296	19	28 – 205
Saravan	1	6	20	82	25	3	11 – 25
Sekong	1	3	3	58	58	23	1 – 0
Champasack	1	9	35	65	70	8	65 – 73
Attapeu	1	5	20	100	51	25	11 – 12
TOTAL DRF	17	118	491	86	1,320	11.5	1,179
NO. FACILITIES	18	142	565	100	11,528	100	-

Source: WHO, 1997, and MOH Food and Drug Department.

Several Drug Revolving Funds and village funds have collapsed, either due to charging according to purchasing prices rather than replacement prices, or interruption in the support from a donor project. Information on cost recovery practices and levels remain partial and sketchy, because of wide variation in practices and importance across provinces and facilities and the absence of a systematic data collection. More and updated information is needed on the extent of the practice of user fees at different levels of facilities and the revenues it generates.

²² ADB, 1999-b, op.cit.

9.4.6 Perspectives on Health Insurance

Households faced with the risk of disease and thus of having to spend a significant amount of money for treatment can do one of four things: they can self insure themselves through accumulation of savings or assets, they can participate in informal insurance schemes such as group-based or community-based insurance, they can buy into a formal health insurance company (whether prepayment or reimbursement based), or they can do nothing and wait until the event happens, and then resort to loans, friends or families as needed to cover their expenses. Most Lao households have so far relied mostly on the last alternative and to a lesser extent to the first one, since 54% of them pay out-of-pocket for their health expenses, 25% borrowed money to pay, and 10% sold some assets.²³ Only 2% were reimbursed for their expenses by some insurance scheme. This shows that, even though several insurance schemes are present in Laos, both formal and informal, as mentioned in Section 9.3.4, very few people use them.

Several difficulties may lie on the way to implementing health insurance in Laos. First, the concept of insurance is new in the country, and Laotians are not used to pre-pay for goods or services. Financial savings does not seem to be a priority for most Lao households. Furthermore, they tend to prefer saving in kind – land or cattle, for instance – rather than in money. In Vinard's study, only 44% of the household surveyed said they were saving, and 85% of these, did it in order to pay for health expenses.²⁴ When households save, they usually keep their savings at home, in the form of money or, more often, land and animals. Indebtedness is also a rare event.

To many Lao people, especially those no in the formal job market, health insurance may look like a tax with no visible benefit. This does not necessarily imply that health insurance schemes are not feasible in Laos, but that they may need some time to catch on, and that some features may need to be adapted to the country's reality. The experience of Assurances Générales du Laos with work-related and car insurance has not been encouraging²⁵, and that company does not yet envision health insurance as a promising market.

Health insurance usually requires at least three things to work: a sufficiently large pool of people so that the probability of an event is low, relatively free information on the risk event so that insurers can estimate expected costs, and willingness to pay from the part of households and/or enterprises. The preceding paragraphs seem to indicate that willingness to pay for insurance is not yet established in the country, although significant differences may exist among socio-economic groups and among ethnic groups. Another issue to consider for the proposed health insurance schemes is the size of their target population. In a small country such as the Lao PDR, with so much regional and cultural diversity, this may be a critical

²³ ADB, 1999a, op.cit.

²⁴ Vinard, 1994, op.cit.

²⁵ More recent information on private insurance companies would be useful to analyse their prospects in Laos.

question, and it is necessary to define and quantify the target population for each proposed scheme in order to assess its feasibility.

9.4.7 Management and Control

The budgeting process in its present form allows for collaboration between provincial health offices – who draw the initial draft proposal – and Central MOH, who define general objectives and strategies. The final word comes from the Ministry of Finance, which in fact holds major decision power in the process of budget definition and allocation. In addition, the district and local levels, which are supposed to draw their own plan and budget, usually do not because they lack the technical capacity to do so.

Weak coordination between levels of government and between ministries, insufficient circulation of information, and the lack of budget consolidation between levels of government, mean that financial information is not readily available for management purposes, and when it is, it is partial and oftentimes unreliable. Furthermore, the available instruments for financial planning and monitoring are not very adequate for management and policy-making purposes. It would be very advantageous to establish a system for measuring and monitoring financial flows within and between government levels akin to a National Health Account, even in a simplified version.

With decentralization, execution of health and other activities is, to the most part, the responsibility of the provinces and districts, which have wide discretion on how to manage their resources. However, decentralization went ahead of province and district governmental units' managerial capacity. It is true that some larger provinces are doing well in this regard, but around 2/3 of them have difficulties planning, identifying appropriate resource allocation, and using resources efficiently. Building this capacity is key to successful decentralization and improvement of the health system.

Finally, increased integration between programmes (vertical programs need to be gradually integrated in the health system), between institutions (including donors) and between levels of government, is crucial to achieving better efficiency and effectiveness in the health system. Coordination and integration of information for planning and monitoring at all levels can help a lot in this process.

CHAPTER 10

HUMAN RESOURCES IN THE HEALTH SECTOR

10.1 INTRODUCTION

It is not an exaggeration to suggest that all health sector issues are linked with human resource development. While in the health sector the roles of different stakeholders and the constraints they work under vary considerably, this report focuses only on the situation of government health personnel. Firstly, the characteristics and distribution of health personnel are analysed. The second part of the discussion concerns organisational settings and training systems, followed by an examination of the human resources development plan. Lastly, there is a preliminary identification of the key issues in human resources development.

10.2 CLASSIFICATION OF GOVERNMENT HEALTH PERSONNEL

Government personnel are categorised into 3 major levels according to their educational level, namely high, middle and low level. The high-level staff are those who have completed 11 years of general education plus professional education to the equivalent of Bachelor's degree level. Middle-level staff have completed 11 years of general education plus diploma level technical education. The low-level staff are those who have completed either 8 or 11 years of general education and received vocational education.

Classification of health personnel, of course, follows this government personnel classification system. Corresponding with the current health worker education system, the government health personnel are classified as follows.

High-level personnel, who are medical doctors, pharmacists, or dentists, have completed 5-7 years of study after upper secondary school at the Faculty of Medical Science, National University of Laos, located in Vientiane municipality.

Middle-level personnel include nurses/midwives, assistant pharmacists, physical-therapists, laboratory assistants, and hygiene inspectors. They have completed 3 years' study after senior high school at the College of Health Technology located in Vientiane municipality.

Low-level personnel are auxiliary nurses who have studied for two years in Public Health Schools (in Savannakhet, Champasak, and Luangphrabang) or Nursing Schools (in Khammuane and Vientiane provinces)

In addition, there are personnel who have undertaken postgraduate study. They have acquired professional education as a specialist (e.g. surgery, obstetrics) and are classified as postgraduate and higher-level health personnel.

In the middle-level category, there are other types of staff with different qualifications under the old system. Medical assistants were previously trained as follows:

- Three-year course at the Public Health Schools in Luangphrabang, Savannakhet and Champasak up to 1994, and the College of Health Technology up to 1989.
- Four- or five-year course at the School of Medicine (predecessor of the Faculty of Medical Science) between 1958 and 1977

At the lower administrative levels, where high-level personnel are rarely found, middle-level staff have in practice been working virtually as “clinical doctors”¹. At the central and provincial levels, on the other hand, their main role has been assisting high-level personnel.

At the School of Medicine (now the Faculty of Medical Science), assistant dentists and assistant pharmacists were also trained on 4-5 year courses during the same period. In addition, the College of Health Technology ran separate 3-year training courses for nurses (without midwifery) and for midwives before they were integrated into a nurse/midwife course in 1990. All these staff fall into the middle-level category.

The educational background of low-level staff varies much more widely. Until 1994, each province had an auxiliary nurse school and the length of the training varied from 3 to 24 months. Enrolees’ general educational backgrounds also differ. While some have completed or at least started lower or upper secondary school, others have not even completed primary school. Some also received short-term nurse training in the army during the period of the revolution. In addition, it has been found that at local level health facilities such as district hospitals and health centres, there are staff who learnt to practise herbal medicine from monks or traditional healers. They are usually regarded as pharmacy technicians, as are those who have been working in laboratories but are under-qualified. All are categorised as low-level staff on the grounds that they have received not more than 2 years’ formal training.

¹ In rural areas, people tend to refer to the most senior staff in a facility as “Than mor” or “Doctor”, regardless of their actual level.

Table 10.1, summarising the qualifications of current health personnel², clearly demonstrates the variety described above. Thus the difficulty of standardising service levels and in-service training can be imagined.

Table 10.1 Summary of the Classification of Current Health Personnel

Level	Qualification	Length of training	Yes: education system exists at present No: education system no longer exists
High level	Medical Doctor	7 years (at present)	Yes
	Pharmacist	5 years (at present)	Yes
	Dentist	6 years (at present)	Yes
Middle level	Medical Assistant	3-5 years	No
	Nurse/midwife	3 years	Yes
	Nurse	3 years	No
	Midwife	3 years	No
	Assistant Pharmacist	3 years (at present)	Yes
	Assistant Dentist	4-5 years	No
	Physical-Therapist	3 years	Yes
	Laboratory Assistant	3 years	Yes
	Hygiene Inspector	3 years	Yes
Low level	Auxiliary Nurse	2 years (at present)	Yes
	Laboratory Technician	-	No
	Pharmacy Technician	-	No

Source: Interview at the College of Health Technology and Department of Organization and Personnel, 2001.
Ministry of Education: *History of The Faculty of Medical Sciences 1957-2000*, National University, Faculty of Medical Sciences.
MOH, Council of Medical Sciences: *Analysis on Health manpower management in Lao PDR*, 1998.

The history and present situation of the health worker education/training system is described in more detail in section 10. 5.

10.3 DISTRIBUTION OF HEALTH PERSONNEL

10.3.1 Chronological Outlook

The number of health personnel of all categories increased considerably up to 1989 (Figure 10.1). Since 1989, the number of high-level personnel has continued to increase. The number of both middle-level and low-level personnel decreased in 1990, since when middle-level

² In some research papers and statistics, staff may be alternatively classified as MD (Medical Doctor), MA (Medical Assistant), and NS (Nurse). These may be interpreted as high-level, middle-level, and low-level, respectively. Staff who have received post-graduate education may or may not be included in the high-level category, so care is needed in interpreting figures.

staffing has increased slightly while low-level numbers have remained at a fairly constant level.

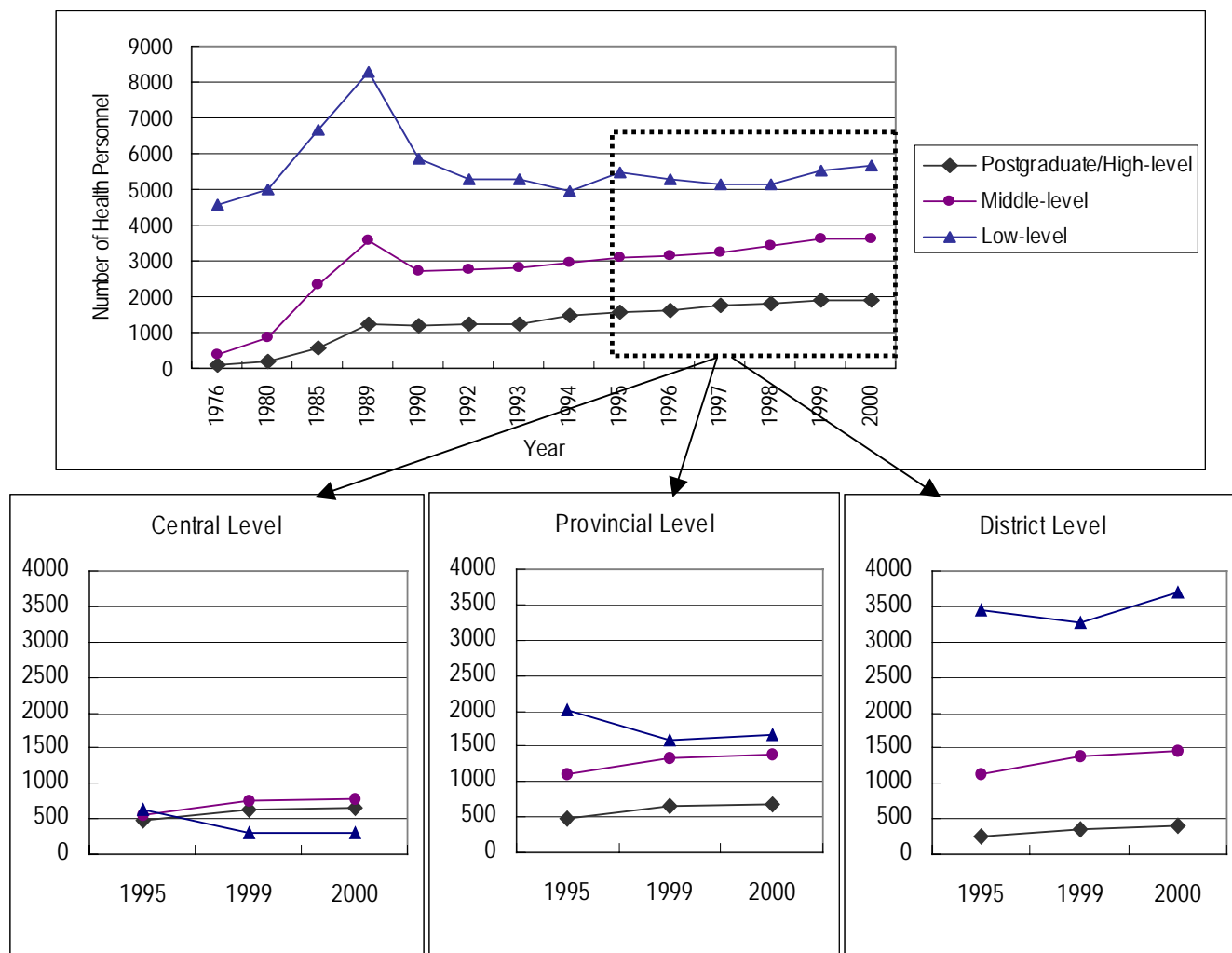
There are a number of conceivable explanations for this pattern.

1. Due to the public sector reform programme based on the New Economic Mechanism Policy (NEM) since 1987, many health staff have moved to the private sector. Some of them started running private pharmacies and clinics and some left the health sector altogether and found other jobs.
2. The NEM also caused the collapse of the co-operative-based health centre system which had been developed from 1975 to 1985. As a result, many auxiliary nurses at the health centre level left the public sector between the late 1980s and the early 1990s³.
3. The closing of auxiliary nurse schools in the provinces led to a decrease in the number of auxiliary nurses in the mid-1990s.

In recent years, staff numbers have been stable, but it is notable that the pattern of change for low-level staff is different at the various administrative levels. At the central level, the number of low-level staff has decreased whereas numbers are increasing at provincial and district levels after a decline in 1999.

³ Alain Noel: *Historical Development of Primary Health Care in Lao PDR*, Asian Development Bank, 1999.

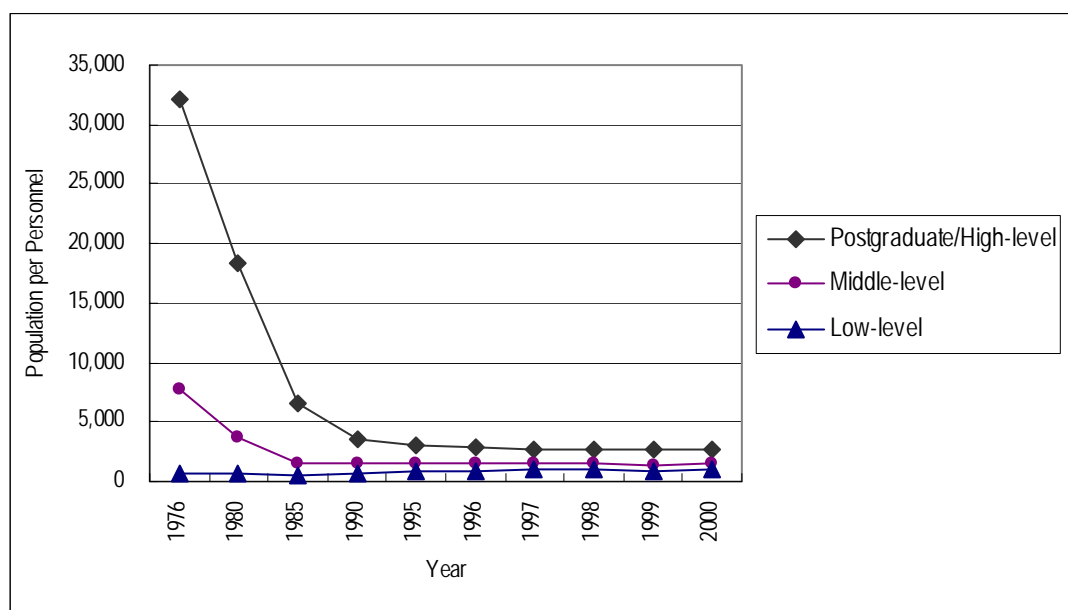
Figure 10.1 Changes in the Number of Health Personnel by Category 1976-2000



Source: MOH

Improvements in the population to health staff ratio were also enormous between 1976 and 1990 (Figure 10.2 and Table 10.2). During this period, the population per post-graduate/high-level staff and middle-level staff was reduced by about a tenth and a fifth respectively. Since 1990, the number of population per staff of these two categories has continued to decrease very slightly. On the other hand, the population per low-level staff has hardly changed in the last 25 years.

Figure 10.2 Ratio of Population to Health Personnel by Category 1976-2000



Source: MOH

Table 10.2 Ratio of Population to Health Personnel by Category 1976-2000

	Postgraduate/High-level	Middle-level	Low-level
1976	32,067	7,779	633
1980	18,280	3,781	641
1985	6,507	1,542	543
1990	3,529	1,516	705
1995	2,947	1,490	845
1996	2,902	1,500	898
1997	2,736	1,495	938
1998	2,758	1,439	961
1999	2,702	1,399	925
2000	2,751	1,447	926

Source: MOH

Compared to average figures for least developed countries between 1992 and 1995 (population per doctor: 3,333, population per nurse: 1,282)⁴, the 1995 figures for Laos (2,947 and 845 respectively) were adequate⁵.

⁴ UNDP: *Human Development Report 2000*.

⁵ The statistics for Laos are not, strictly speaking, comparable because the high-level staff category includes not only medical doctors but also pharmacists and dentists. The ratio of population to low-level staff also underestimates the population to nurse ratio.

In 2000, population to health staff ratios were 2,751 per post-graduate/high-level staff, 1,447 per middle-level staff, and 926 per low-level staff. However, it must be borne in mind that in reality, a number of health staff are not working in a clinical environment or dealing directly with service recipients, but rather spend considerable time performing administrative and managerial duties. In addition, as discussed below, there are considerable disparities in health staff distribution among different areas of the country.

In conclusion, these changes clearly indicate that the emphasis of health staff development in Lao PDR has already shifted from quantity-oriented to quality-oriented.

10.3.2 Current Situation

(1) GENERAL OUTLOOK

In 2000, there were 11,432 health personnel in the country (Table 10.3). Of these, 16.4% (1,876 personnel) were working at central level. The remainder can be divided into two groups: those working at provincial level, namely, at Provincial Health Offices and Provincial Hospitals; and those working at the district level, i.e. at District Health Offices, District Hospitals, and health centres. Provincial level staff account for 33.8% (3,861) of the total and district level staff for 49.7% (5,679).

Table 10.3 Number of Health Personnel 2000

No.	Provinces	Total No. of Staff in the Province		Provincial Level			District Level		
		Total (No. of female)		Total (No. of female)	Provincial Health Office	Provincial Hospital	Total (No. of female)		
1	Vientiane Municipality	778	(442)	376	(225)	90	286	402	(217)
2	Phongsaly	468	(172)	117	(42)	41	76	351	(130)
3	Luangnamtha	286	(163)	147	(92)	54	93	139	(71)
4	Oudomxay	386	(173)	183	(87)	84	99	185	(86)
5	Bokeo	267	(128)	131	(75)	56	75	136	(53)
6	Luangphrabang	944	(512)	449	(269)	149	300	495	(243)
7	Huaphanh	412	(230)	190	(107)	67	123	222	(123)
8	Xayaboury	588	(259)	156	(78)	55	101	432	(181)
9	Xiengkhuang	300	(179)	143	(89)	65	78	157	(90)
10	Vientiane	597	(305)	71	(12)	71	-	526	(293)
11	Bolikhmxy	416	(208)	142	(66)	56	86	274	(186)
12	Khammuane	753	(482)	308	(196)	119	189	445	(286)
13	Savannakhet	1,163	(682)	487	(294)	201	286	676	(390)
14	Saravane	548	(280)	199	(88)	85	114	349	(192)
15	Sekong	214	(124)	114	(63)	60	54	102	(61)
16	Champasak	1,024	(564)	467	(257)	189	278	557	(307)
17	Attapeu	252	(144)	148	(55)	58	90	104	(56)
18	Xaysomboun Special Region	160	(73)	33	(17)	33	-	127	(56)
Total		9,556	(5,120)	3,861	(2,112)	1,533	2,328	5,679	(3,021)
Central Level		1,876	(1,152)						
Grand Total		11,432	(6,272)						

Source: MOH

Note: The figures do not include contractual staff.

In two-thirds of the provinces, over 50% of staff are female, both at provincial and district levels, as is also the case at central level. However, females are under represented among post-graduate and high-level staff (Table 10.4).

Table 10.4 Health Personnel by Administrative Level and Category in 2000

No.	Level	Central Level			Provincial Level			District Level			Total		
		Total	M	F	Total	M	F	Total	M	F	Total	M	F
1	Postgraduate	119	87	32	42	34	8	0	0	0	161	121	40
2	High-level	645	304	341	683	405	278	415	273	142	1,743	982	761
3	Middle-level	771	223	548	1,389	555	834	1,461	744	717	3,621	1,522	2,099
4	Low-level	290	91	199	1,664	632	1,032	3,702	1,603	2,099	5,656	2,326	3,330
5	Non-level*	51	19	32	83	34	49	101	38	63	235	91	144
Sub-Total		1,876	724	1,152	3,861	1,660	2,201	5,679	2,658	3,021	11,416	5,042	6,374
6	Contractual Staff	260	-	-	270	-	-	454	-	-	984	-	-
Grand Total											12,649	10,084	12,748

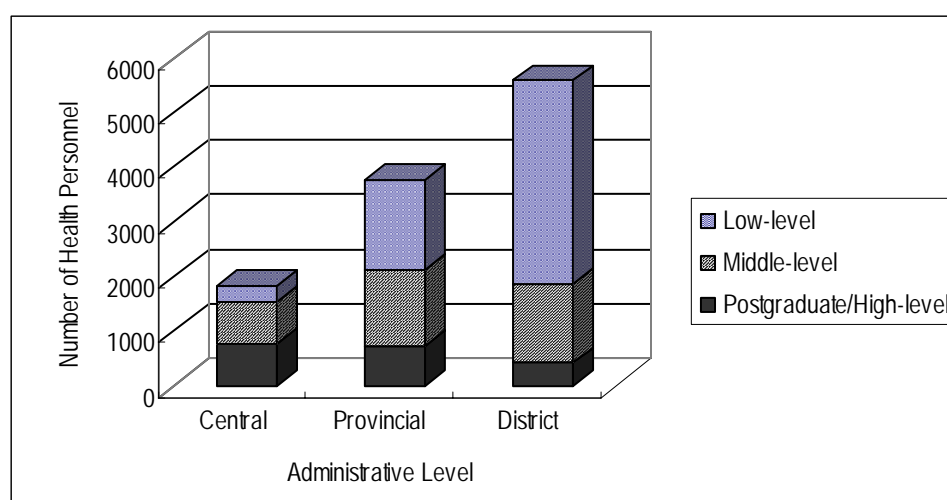
Source: MOH

Note: M: Male, F: Female

*Those engaged in ancillary work (e.g. clerks, drivers, cleaners, etc.)

The proportion of low-level to total staff is greater at the lower administrative levels (Figure 10.3). About 66% of all low-level staff in the country works at district level. For middle-level staff, 21% work at central, 38% at provincial, and 40% at district level. For post-graduate and high-level staff, 40% work at the central level while 38% work at provincial and only 22% at district level.

Figure 10.3 Health Personnel by Administrative Level and Category in 2000



Source: MOH

This uneven distribution of health personnel appears to be a real issue of concern. The population to health staff ratio gives the number of people served by one health staff, while the proportion of health staff working at the provincial level shows the percentage of the

province health staff working at the provincial centre, generally at the Provincial Health Office or Provincial Hospital (Table 10.5).

In case of Vientiane municipality, two types of figures are used in order to calculate the population to health staff ratio:

- Vientiane Municipality (1): The number of staff only includes those working under the jurisdiction of Vientiane Municipality.
- Vientiane Municipality (2): The number of staff includes that of Vientiane Municipality (1) and those who are working for two Central hospitals, namely Mahosot and Friendship Hospitals. It is based on the assumption that the major beneficiaries of these hospitals are Municipality residents.

Table 10. 5 Population to Health Staff Ratio and Rate of Staff Stationed at Provincial Level by Province 2000

Province	Population	Population to health staff ratio			Percentage of health staff at provincial level			
	Total: 5,238,700	Postgraduate/ High-level	Middle- level	Low- level	Postgraduate /High-level	Middle- level	Low- level	Average
Vientiane Municipality (1)	597,800	3,623	2,645	1,642	66.1%	42.0%	45.6%	49.0%
Vientiane Municipality (2)		1,320	958	1,099	-	-	-	-
Phongsaly	174,300	6,456	1,629	499	70.4%	29.9%	16.6%	22.6%
Luangnamtha	130,800	3,442	1,635	802	60.5%	53.8%	47.9%	51.2%
Oudomxay	239,700	5,574	2,261	1,120	67.4%	60.4%	34.1%	45.7%
Bokeo	129,500	3,924	1,619	1,079	48.5%	63.8%	38.3%	48.5%
Luangphrabang	416,600	5,208	1,197	837	68.8%	60.1%	35.7%	47.7%
Huaphanh	332,800	10,085	2,465	1,453	63.6%	60.7%	34.5%	45.8%
Xayaboury	416,100	6,605	2,020	1,342	46.0%	28.2%	21.3%	26.4%
Xiengkhuang	228,800	5,321	2,359	1,354	79.1%	45.4%	37.9%	46.0%
Vientiane	326,800	4,300	1,499	1,131	23.7%	17.0%	5.2%	12.0%
Bolikhambay	186,600	2,962	1,517	829	71.4%	48.0%	46.7%	50.9%
Khammuane	310,700	4,315	1,679	657	68.1%	49.2%	33.4%	40.8%
Savannakhet	766,200	5,142	2,022	1,224	64.4%	44.3%	35.8%	42.3%
Saravane	292,200	5,038	1,815	864	58.6%	40.4%	29.0%	35.4%
Sekong	73,100	2,358	1,030	683	74.2%	64.8%	44.9%	56.0%
Champasak	571,900	4,300	1,546	1,077	74.4%	51.6%	30.3%	43.6%
Attapeu	99,400	3,206	1,004	835	90.3%	54.5%	54.6%	59.0%
Xaysomboun Special Region	61,600	4,400	1,540	576	57.1%	27.5%	14.0%	21.1%
National Average (Population per staff)*		2,751	1,447	926				
Average Proportion of Staff at Provincial Level					64.0%	46.7%	33.7%	41.3%

Source: MOH

Note: * Figure from Table 10.2

These two indicators indicates the following characteristics:

1. The fact that the smallest ratios for postgraduate/high-level and middle-level staff, and the largest ratio for low-level staff are found in Vientiane Municipality (2) implies a large concentration of better-qualified staff in the Municipality.
2. In remote provinces such as Sekong and Attapeu, the population to staff ratios are very small. However, this must be mainly attributed to the small population in these provinces. The high percentage of provincial level staff and the difficulty of access to the remote parts of these provinces suggest that the health/medical service might not reach the rural population sufficiently.
3. In Oudomxay, Xayaboury, Huaphanh, and Xiengkhuang, the population to staff ratios are significantly large at all levels. It implies that an insufficient number of health staff are deployed in such mountainous provinces.
5. In Savannakhet, which is usually regarded as a better-served province, the population to staff ratio is as large as the 4 provinces mentioned above.
6. Indicators for Phongsaly have distinctive features. Of all the provinces, the population to postgraduate and high-level staff ratio is nearly the highest, while the figure for low-level staff is the smallest. The percentage of provincial level staff shows that most postgraduate and high-level staff are working at the provincial level (70.4%) whereas a fair percentage of middle- and low-level staff are working at district level (about 70% and 83% respectively).

(2) STAFF DISTRIBUTION BY HEALTH FACILITY AND QUALIFICATION

The distribution of health staff varies considerably among the different types of health facilities as Table 10.6 indicates. Distinctive characteristics of the distribution are summarized as follows.

- Health centres are staffed predominantly by low-level staff, mostly auxiliary nurses. There are no significant numbers of middle-level staff.
- There are large numbers of middle-level medical assistants and low-level auxiliary nurses at all types of facility. Most medical assistants are working at provincial and district level (provincial health office and hospital, district health office and hospital) but more rarely in health centres.
- Except for medical assistants, middle-level staff are lacking in district hospitals. For example, a total of 129 district hospitals have only 65 assistant pharmacists and 93 laboratory assistants between them, meaning that some district hospitals have no middle-level staff in their pharmacy or laboratory. There are also few middle-level nurses relative to low-level auxiliary nurses.

Overall, low-level staff are concentrated at the lower administrative levels.

Table 10. 6 Staff Distribution by Health Facility and Qualification

Level and Qualification	Total by type of facility					Grand Total
	PHO	PH	DHO	DH	HC	
(Medical Staff)						
Postgraduate level and higher	25	36	4	-	0	65
(Medical Staff)						
University graduate level	282	369	228	393	0	1,272
Medical Doctor	174	298	188	356	0	1,016
Pharmacist	87	30	26	37	0	180
Dentist	11	27	10	-	0	48
Nurse	2	5	3	-	0	10
Laboratory Specialist	0	5	0	-	0	5
Other (Specify)	8	4	1	-	0	13
(Medical Staff)						
Middle-level	535	781	770	721	222	3,029
Medical Assistant	254	352	474	429	199	1,708
Nurse	27	184	78	134	11	434
Assistant Pharmacist	40	29	47	65	2	183
Assistant Dentist	11	30	34	-	0	75
Physical-therapist	20	47	15	-	1	83
Laboratory Assistant	34	89	50	93	3	269
Hygienist	61	0	43	-	1	105
Prosthetics Assistant	14	16	8	-	0	38
Other (Specify)	74	34	21	-	5	134
(Medical Staff)						
Low-level	426	1,074	1,422	1,935	790	5,647
Auxiliary Nurse	275	763	1,158	1,801	692	4,689
Midwife	7	33	12	-	2	54
Laboratory Technician	12	26	23	56	9	126
Pharmacy Technician	56	41	54	78	7	236
Other (Specify)	76	211	175	-	80	542
(Non-Medical Staff)						
University Graduate and Higher Level	2	0	0	-	0	2
Middle Level	18	0	3	-	0	21
Primary Level	51	0	27	-	0	78
Grand Total	1,339	2,260	2,454	3,049	1,012	10,114

Note: PHO: Provincial Health Office, PH: Provincial Hospital, DHO: District Health Office, DH: District Hospital, HC: Health Centre

1) In case of District Hospital (DH), data obtained cover only the categories of health staff listed below. Therefore, a blank cell does not mean that there is no staff with that qualification at DHs.

Medical Doctor (high-level), Pharmacist (high-level), Medical Assistant (middle-level), Nurse (middle-level), Assistant Pharmacist (middle-level), Laboratory Assistant (middle-level), Auxiliary Nurse (low-level), Laboratory Technician (low-level), Pharmacy Technician (low-level)

2) At district level, some staff work for both District Hospital and Health Office. Therefore, some staff in DH and DHO may be double-counted.

Source: MOH-JICA Study Team, Facility based Survey, 2002

10.4 ORGANISATIONAL SETTING

The Department of Personnel and Organisation of the Ministry of Health is primarily responsible for health personnel management and training. It comprises 5 divisions: Education and Refresher Staff Training Division, Personnel and Organisation Division, Staff Welfare Division, Administration Division, and Party Bureau. The Education and Refresher Staff Training Division supervises all pre-service and in-service training. Therefore, all health-related educational institutes such as the College of Health Technology, the Nursing Schools and the National Institute of Public Health come under the control of this division. However, responsibility for the Faculty of Medical Science has been with the Ministry of Education since it became part of the National University of Laos in 1996. The Education and Refresher Staff Training Division is also responsible for the planning, implementation and monitoring of human resources development in the health sector. Meanwhile, the Personnel and Organisation Division is responsible for deployment and recruitment of personnel, health personnel statistics, and organisational rules and regulations.

10.4.1 Deployment of Health Personnel

(1) GENERAL RULES

According to a ministerial decree, the deployment of health staff follows the procedures below:

- The Director and Deputy Director of the Provincial Health Office are appointed by the central Ministry in consultation with the Provincial party committee and Provincial Governor.
- Candidates for Director and Deputy Director of the District Health Office are nominated by the Director of the Provincial Health Office after consultation with the party and local government at each level and then submitted to the Ministry for approval.
- The Director of the District Health Office nominates a candidate for head of section to be approved by the Director of the Provincial Health Office.
- The Director of the District Health Office is responsible for promotion, discipline, and deployment of health staff at district level, but with the agreement of the district party committee and District Chief and approval from the Provincial Health Office.

The District Chief, Provincial Governor, and District and Provincial party committees have an influence on the appointment of health personnel. In other words, the Provincial Health Office

and District Health Office are vertically responsible to the Ministry and horizontally responsible to provincial and district governments and party committees⁶.

The transfer of staff between provinces or to and from central level is under the control of the Ministry.

(2) THE PRESENT SITUATION

Finding qualified personnel to work in remote health centres is the most difficult issue in deployment. Although the Director of the District Health Office has full control over the deployment and rotation of health staff in the district, these powers are limited in practice due to a number of constraints:

- Staff salaries are insufficient to maintain livelihoods and in any case are often paid late. This means that staff at district level are often engaged in secondary occupations such as agriculture or private medical practices in order to support their families, which would be compromised if they were redeployed.
- Few staff are willing to be posted to remote areas due to difficult living conditions, poor transportation links and a lack of social services.
- Few health staff are from ethnic minority groups. Cultural and linguistic differences mean they are reluctant to be posted to remote ethnic minority areas.
- Family members are also reluctant to move, and it is rare for staff to move without being accompanied by their families.

As a result, health centres tend to be staffed by younger and less experienced female nurses, with the result that staff shortages and inadequate levels of service are common problems at district and village levels.

Finding appropriate methods of rotation between district level and health centres is a controversial issue. Some argue that regular rotation for limited periods will eliminate the difficulty of deployment. Others feel that health centre staff should stay longer in one place in order to understand their community's health situation and communicate with local people to encourage them to become involved in health promotion activities. This issue clearly needs further examination.

In order to solve the acute shortage of health centre staff, local people are trained for several months and then hired on a contractual basis to work in their local health centre. Some of these are young and inexperienced, although some may have some experience of health and medical practice or education. The issue, however, is that the quality of personnel is not assured, and the province has to bear the extra costs of employment.

⁶ Rudi Klauss: *Laos – The Case of a Transitioning Civil Service System in a Transitional Economy*, Academy for Educational Development, 1997.

In general, high- and middle-level staff prefer to stay in towns: preferably in Vientiane, or at least in regional centres such as Luangphrabang, Savannakhet or Pakse, because of the better quality of life and availability of professional opportunities. For example, it is difficult for health staff in the provinces to take advantage of opportunities to study abroad because English tuition is not available and access to information is limited. Being posted in the provinces also limits the opportunities for networking, essential for those who wish to secure rapid promotion. Some staff even leave the public sector rather than move to a posting in the countryside, leading to an oversupply of health staff (in or out of government service) in Vientiane.

The quota system aims to ensure a regular supply of technical and professional personnel to the provinces (see section 10.5.9). However, neither the health worker education schools, the Ministry of Health, nor the Provincial Health Offices monitor quota system students after their graduation to enforce the quota policy⁷.

(3) FUTURE PERSPECTIVE

In the series of Health Forums, many participants from the provinces and districts emphasised the need for special incentives or allowances to encourage health staff to work in remote areas, in order to take account of the difficult conditions; otherwise morale and motivation of the staff would continue to deteriorate.

Recently, the Ministry of Health prepared the Decree on “Promoting Health Personnel in Remote Rural Areas”. The Decree defines the increase of salary for health personnel posted in 3 different types of areas; 15% increase for remote areas; 20% for remote mountainous areas; and 25% for remote areas with special difficulties. The Decree is now under examination by the Prime Minister’s Office.

10.4.2 New Recruitment

Every year, Provincial Health Offices estimate the number of each category of health staff they need to recruit for the following year, based on the needs at district and provincial levels. Requests are submitted to the Ministry of Health for collation and approval. Information on vacancies is available for central, provincial and district levels. According to the public sector reform strategy, the number of new staff recruited annually should not exceed 1.5-2% of existing staff levels. In the last 5 years, the number of newly hired staff has ranged from 291 to 550 (Table 10.7).

⁷ The Teacher Training Department of the Ministry of Education has been trying, apparently successfully, a new policy of direct assignment this year in order to confront exactly the same problem with newly trained teachers.

Table 10.7 Number of New Recruitment by Category 1996-2000

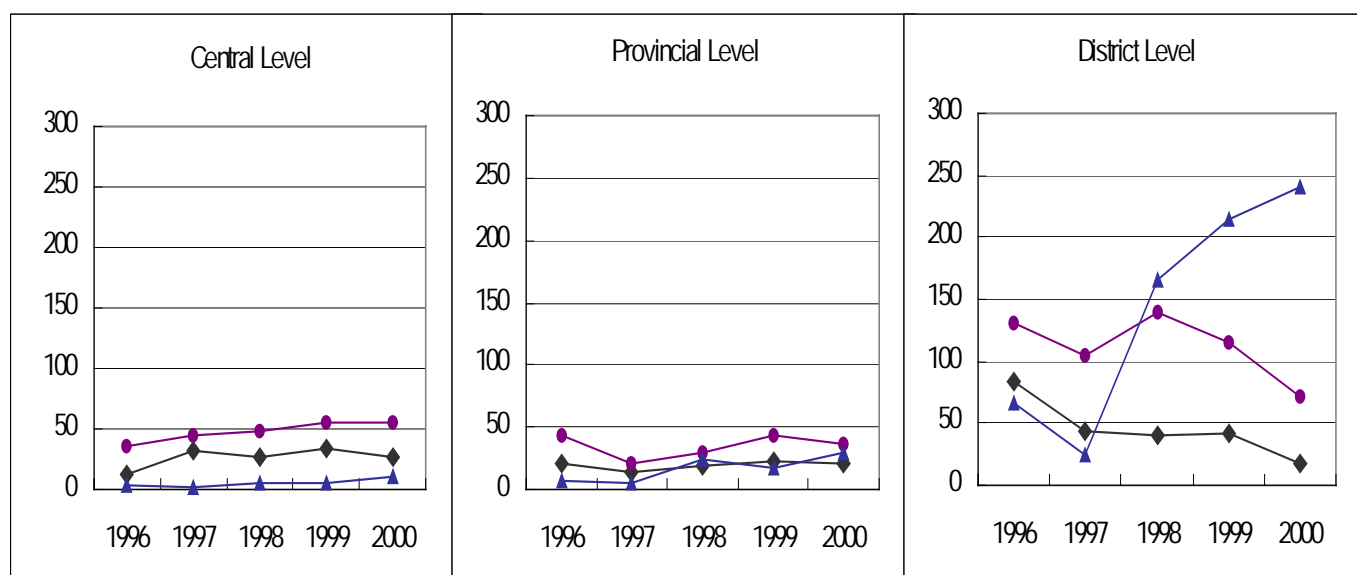
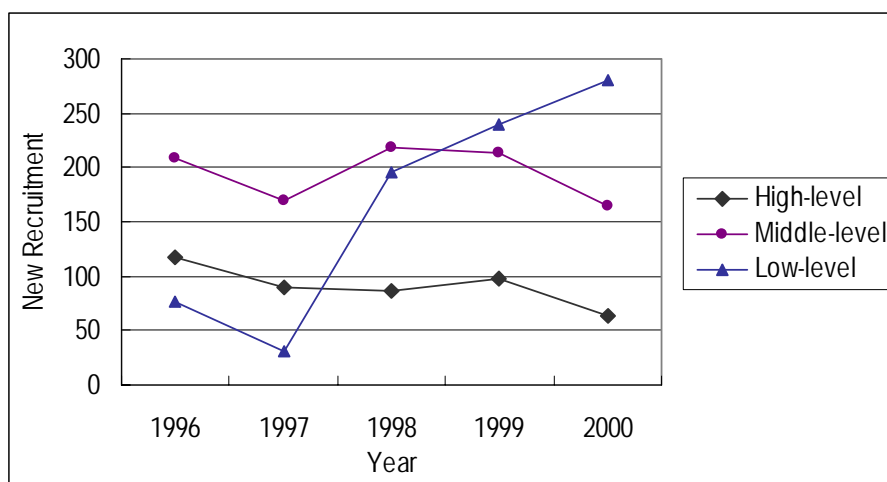
Year	Allocated Posts	Central Level				Provincial Level				District Level				Total
		High-level	Middle-level	Low-level	Total	High-level	Middle-level	Low-level	Total	High-level	Middle-level	Low-level	Total	
1996	403	13	35	4	52	20	44	7	71	84	130	66	280	403
1997	291	32	45	1	78	14	20	6	40	44	105	24	173	291
1998	500	27	49	5	81	19	30	25	74	40	139	166	345	500
1999	550	34	55	6	95	23	43	18	84	41	115	215	371	550
2000	520	26	56	11	93	20	36	29	85	18	72	240	330	508

Source: MOH

When analysed by qualification and administrative level, the numbers of new employees reveal distinctive features (Figure 10.4). At the central and provincial levels, the number of high-level staff recruited has remained almost constant and that of middle- and low-level staff has risen and fallen within a narrow range. In contrast, at the district level, employment of low-level staff has increased drastically in the last 4 years while high- and middle-level staff recruitment has decreased. Increase of low-level staff might be a result of the recent increase in the number of health centres. In order to appoint staff to newly built health centres, ex-health workers or persons with sufficient general education were intensively recruited locally with short-term training as health centre staff, which might explain this phenomenon in part.

At the health worker training schools, it was often remarked that a significant number of graduates fail to be appointed as government health staff. There are two possible explanations: one is that there are not enough vacant posts for all new graduates; the other is that graduates will not accept certain positions.

Figure 10.4 New Recruitment by Qualification and by Administrative level 1996-2000



Source: MOH

10.4.3 General Working Conditions for Health Staff

It is common knowledge that health staff salaries are not sufficient to cover the basic cost of living. According to the facility based staff interview survey⁸ (hereafter, referred to as the Survey) conducted by the MOH-JICA Study Team, the overall average of the health staff salary is 150,500 Kip per month (approximately equivalent to 15 US\$ at 2002 rates). Salary differentials between high-level staff (mostly, medical doctors) and middle-level staff (medical assistants, nurses, and paramedical staff) are very low, as shown in Table 10.8.

⁸ A total sample of 594 health staff were surveyed from 18 provincial hospitals, 36 district hospitals (2/province*18), and 72 health centres (4/province*18).

Table 10.8 Salary of Health Staff

Kip / month	All Respondents		High-level Staff		Middle-level Staff		Low-level Staff	
	Number	%	Number	%	Number	%	Number	%
=< 100,000	110	18.5	0	0.0	31	14.2	76	26.6
100,001 – 150,000	172	29.0	14	17.3	64	29.2	93	32.5
150,001 – 200,000	229	38.6	45	55.6	90	41.1	94	32.9
200,001 – 250,000	53	8.9	13	16.0	26	11.9	14	4.9
250,001 – 300,000	12	2.0	6	7.4	4	1.8	2	0.7
300,001 =<	5	0.8	2	2.5	1	0.5	2	0.7
No answer	13	2.2	1	1.2	3	1.4	5	1.7
Total	594	100	81	100	219	100	286	100
Average	150,500 Kip		188,900 Kip		157,600 Kip		137,100 Kip	

Source: MOH-JICA Study Team, Facility based Staff Interview Survey, 2002

Note: Auxiliary staff below low-level (8 persons) are excluded in the breakdown by level.

In addition, the payment of salaries is often delayed. The Survey revealed that 63% of health facility staff receive their salaries from 1 to 3 months late (Table 10.9).

Table 10.9 Delay of Salary Payment

Number of Months salary delivery delay	All Respondents		Provincial Hospital Staff		District Hospital Staff		Health Centre Staff	
	Number	%	Number	%	Number	%	Number	%
On time	127	21.4	43	25.6	55	19.4	29	20.3
1 - 3 months	375	63.1	100	59.5	191	67.5	84	58.7
4 – 6 months	67	11.3	15	8.9	35	12.4	17	11.9
6 months <	1	0.2	0	0.0	1	0.4	0	0.0
No answer	24	4.0	10	6.0	1	0.4	13	9.1
Total	594	100	168	100	283	100	143	100

Source: MOH-JICA Study Team, Facility based Staff Interview Survey, 2002

As a result, health staff tend to take on secondary occupations to earn additional income for their family needs. One research paper suggests that they spend only three or four hours a day performing their official duties⁹. In the Survey, about 32% of total respondents answered that they are engaged in a secondary occupation. While agricultural activity is the most common source of supplementary income, running private clinics is also common among high- and middle-level staff (Table 10.10).

⁹ Stephen Holland, et al: *Impact of Economic and Institutional Reforms on the Health Sector in Laos: Implications for Health System Management*, IDS, 1995.

Table 10. 10 Type of Secondary Occupation

Type of occupation	Respondents having a secondary occupation		High-level Staff		Middle-level Staff		Low-level Staff	
	Number	%	Number	%	Number	%	Number	%
Farming, livestock raising	132	70.2	8	32.0	56	72.7	65	80.2
Clinic, Pharmacy	25	13.3	16	64.0	7	9.1	2	2.5
Commercial activity	10	5.3	1	4.0	3	3.9	6	7.4
Handicraft	9	4.8	0	0.0	6	7.8	3	3.7
Other	10	5.3	0	0.0	4	5.2	4	4.9
No answer	2	1.1	0	0.0	1	1.3	1	1.2
Total	188	100	25	100	77	100	81	100

Source: MOH-JICA Study Team, Facility based Staff Interview Survey, 2002

Note: Auxiliary staff below the low-level (5 persons) are excluded from the breakdown by level.

10.5 HEALTH STAFF EDUCATION AND TRAINING SYSTEM

At present, there are three providers of pre-service training for health workers in the country: the Faculty of Medical Science in the National University of Laos, the College of Health Technology and the Nursing Schools. According to the Ministry of Education, the Faculty of Medical Science is classified as tertiary education (= high-level: “sansung”), the College of Health Technology as upper secondary technical education (= middle-level: “sankang”), and the Nursing Schools as upper secondary vocational education (= low-level: “santon”). Thus the qualifications from the health training institutions are graded one level lower than other technical/vocational schools. However, it is generally recognised that more years of training are required for workers in the health sector than for general vocational and technical training.

10.5.1 Faculty of Medical Science

In 1968 the first medical training began in Laos with a Bachelor of Medicine course run at the School of Medicine, Sisavangvong University, which subsequently became the University of Health Sciences in 1975. As part of the National University of Laos, the Faculty of Medical Science has come under the aegis of the Ministry of Education since 1996. It is primarily dedicated to educating Medical Doctors, Dentists and Pharmacists.

(1) THE SETTINGS

The Faculty of Medical Science is situated on a campus of seven buildings including 1) the office of the dean and administration, 2) the library, 3) the classrooms, 4) the general office, 5) the laboratories, 6) the Dental Clinic, 7) the student facilities and cafeteria. Another campus across the street also hosts a large building with training facilities (such as the Dental clinic).

They are four main Offices under the direction of the Dean:

- The Dean's Office
- The Academic Office
- The Administration Office (directly dependent on the Dean's Office)
- The Students Affairs Office

There are three departments within the Faculty of Medical Sciences: 1) the department of Medicine, 2) the department of Pharmacy, and 3) the department of Dentistry. In addition, there are other services such as a dental clinic, the computer room (open for visitors from partner institutions), the English classroom for the faculty, and the audio-video service.

In spite of the support of various donors, the Faculty library is poorly equipped. The Faculty buildings are old, with too few classrooms, practice rooms and student dormitories. Teaching staff do not have sufficient facilities available to them.

(2) STAFF, TEACHERS AND STUDENTS

1) Staff

The Faculty of Medical Sciences has a Dean and three Department Directors, in charge of Technical, Administrative and Student Affairs. The total number of staff is 159 (76 females): 49 for Administration, 49 for the Department of Medicine, 23 for the Department of Pharmacy and 34 for the Department of Dentistry. The Faculty invite also 180 part-time instructors mainly from the Ministry of Health or affiliated institutions.

Professors and Teachers (18 of them permanent at the Department of Medicine, Faculty of Medical Science) possess a range of qualifications including 3 PhDs, 8 Master's degrees, 3 specialists and 94 Bachelor's degree. Also 6 clinical teachers conduct training: 3 surgeons, 2 gynecobstetricians, and 1 Medical internist. There is no paediatrician.

Table 10.11 Faculty of Medical Sciences (2001-2002)

Faculty of Medical Science	Programmes	Length in years	Qualification	No. of Teachers	No. of Students	No of Graduates
Department of Medicine	Doctoral Medical degree	7	Medical Doctors	6	330	113
Department of Pharmacology	Bachelor of Pharmacy	6	Pharmacist	5	110	34
Department of Dentistry	Bachelor of Dentistry	5	Dentist	5	97	36
Post Graduation	Paediatrics		Paediatrician	2	17	4

Source: The Faculty of Medical Science, National University of Laos, 2002

2) Students

In order to enrol in the Faculty of Medical Science, students, who have completed upper secondary school, should study for 2 years in the Faculty of Fundamental Sciences, National University of Laos, then pass a University test and be selected by ranking for the Faculty of Medical Science (1996 rules).

There is no constant recruitment of students on a regular basis (also due to the recent changes in the curriculum) so the graduate numbers vary from year to year despite no changes in demand. Most students have only a basic knowledge of a second language and therefore have very limited access to foreign textbooks.

There are two methods of admission for students: quota and non-quota.

- Under the quota system, the Ministry of Education stipulates the number of students from each province to be accepted into the Faculty. Each provincial authority nominates an according number of students to be approved by the Ministry of Education.
- Students are selected for non-quota places on the basis of a competitive entrance examination. In 2001, 100 students entered the Faculty, of whom 21 came from senior high school through the quota system, 30 were serving government health staff and 49 came through the entrance examination.

Scholarships are awarded to quota students. Students need to maintain an excellent academic record in order to retain their scholarships. Non-quota students are also eligible for scholarships on the basis of their academic record. After graduation, quota students are required to return to work in their own province, or repay the amount of the scholarship, a rule that is not enforced properly.

3) Teaching/Training

After two years of premedical study (the foundation course at the Faculty of Sciences), the following four to five years are spent at the Faculty of Medical Science campus and Hospitals (Three University Hospitals have been proposed).

For all departments, the academic year runs from October to June with a final examination in July. 90% of students pass the examination for each subject, and almost all pass the graduation examination in October. Re-sits are conducted in December, so that almost every student graduates successfully in the end.

Most of the formal teaching is done at the Faculty of Medical Science, though rarely some lectures are given at the hospital or other institution. Classrooms contain basic wooden chairs and tables with enough space to accommodate 50 students at a time. Books and teaching materials are available at the Faculty of Medical Science including textbooks (to borrow from the library, most in foreign languages), Internet access, and a database of medical references (exchange with the Francophone Institute of Tropical Medicine: IFMT).

(3) THE SITUATION OF EACH DEPARTMENT

1) The Department of Medicine

The course at the Department of Medicine lasts seven years. After two years of premedical studies, students study Pre-clinical Sciences in the 3rd and 4th years through lectures and practical training. Clinical Sciences are taught from the 5th to 7th years. Students undergo practical clinical training at national hospitals and centres affiliated to the Ministry of Health in the morning while lectures on clinical subjects are given in the afternoon. Students in the 7th year receive clinical training in principal subjects such as Internal Medicine, Surgery, Obstetrics and Gynaecology and Paediatrics at Mahosot, Sethathirath and Friendship Hospitals. In addition, students go to rural areas for training in community medicine, usually in co-operation with district hospitals. In community medicine, students work in villages on PHC, EPI and health education to VHVs.

In-house training concerns mostly anatomy, microbiology, basic sciences, and physiology. Only posters and some artificial models are available for anatomy courses. The physiology laboratory appears limited. Most histology training session is conducted in the laboratory with several old microscopes but the staining of the slides is done at the Mahosot hospital. Other practical training courses are carried out within the other departments of the faculty.

Hospital training: Three Hospitals participate, namely Mahosot, Friendship, and Sethathirath Hospitals. Students attend the hospital 3 times a week (in the morning) beginning in year 2 of

the medical courses and then every morning in the 4th year, and are taught in the afternoon. Some students in the 4th and 5th year are internist volunteers at the hospital subject to their acceptance by the ward chief (Mostly Mahosot Hospital).

There is an agreement between the faculty and the hospitals but not a real policy for both to work in harness and in a practical manner for the benefit of the students. Presently training sessions are organized by the hospital wards without consulting the Faculty of Medical Science.

2) The Department of Pharmacy

The 5-year course leading to a Bachelor of Pharmacy began in 1981. The yearly intake of students is 25 to 30. After two years of premedical studies, students go on to the professional course. The course consists of theoretical subjects taught in the Faculty and practical study outside. The fifth year students undertake practice at the Institute for Medical Plants Research and Sethathirath Hospital. There are 25 teaching staff: one a Master's degree-holder and the remaining 24 holding Bachelor's degrees.

The laboratories are old and with an extremely limited amount of old materials. Everything needs to be replaced (older than 15 years). There is a very limited but old (more than 20 years) collection of indispensable chemical products, and natural extracts and other substances in good condition, but which need to be reconditioned.

The premises have limited space (only 20 students can attend most of the laboratory classes) and need to be entirely renovated and refurbished (including benches, water supply, etc.).

3) The Department of Dentistry

Students go on to the professional course after completing premedical studies. The professional course consists of theoretical subjects taught in the Faculty and practical study. The Department has a dental clinic to provide dental care services and to enable students to undertake clinical practice. After completing the theoretical courses, all final year students undertake a month of fieldwork, after which they sit the final examination. There are 34 teaching staff, holding one Ph.D., one Master's, and thirty-two Bachelor's degrees.

The Dental Clinic is of a standard design but needs to be entirely renovated and to include dental units which can be used for all activities (i.e.: periodontal, pedo-odontology); it is important to note that the Clinic is active and patients attend it on a regular basis. It is an excellent means for teaching students and needs to be strongly supported.

(4) FACILITIES AND EQUIPMENT

1) The Library

The library is under development with good basic foreign textbooks available but many students do not read a foreign language. Lao textbooks are limited and not up to date. Databases (references) and Internet access are available to a limited extent (in terms of time and space) and present the same problem of foreign languages. Some other documents are available in Lao but the quality of the content must be assessed and clearly needs to be updated.

2) The Computer Room

This needs to be developed for more extended use by the students. No “epidemiology-statistics” package is available.

3) The Audio-Video service

This is a very limited service, probably most useful for teaching foreign languages. Some video teaching material can also be seen, and this could be developed further.

4) English Training

The English Language Centre was established by the General Council of the Assemblies of God. The objectives of the project, running since 1992, are to improve English proficiency, to help in the translation of medical books from English to Lao, and to invite native speaker English teachers to teach staff and students. Access to English classes for trainers is limited.

(5) POSTGRADUATE EDUCATION

The “Paediatric Residency Program“, is the country’s first Residency Programme. The programme is supported by Health Frontiers, an American NGO. It started in 1997 and accepted medical doctors with three or more years’ clinical experience. The 5 or 6 doctors accepted onto the course receive training at Khon Kaen University in Thailand and Case Western Reserve University in Ohio, in addition to the training at the Department of Medicine in Vientiane. The programme also contributes to clinical research, the development of clinical practice for medical students, foreign language training, and the development of information technology. The Department of Medicine is trying to establish other postgraduate resident programmes such as internal medicine, obstetrics and gynaecology, and ophthalmology next year in co-operation with NGOs.

(6) OTHER PROGRAMMES

1) Technical Assistance from the CHINA MEDICAL BOARD PROJECT

This programme started in 1992 in collaboration with the Rockefeller Foundation. The purposes of the programme are to assist in the development of the curriculum, human resource development, improvement of the library, and provision of textbooks and educational instruments. Between 1992 and 1995, 18 Faculty teaching staff attended 10-month training courses at Chiang Mai University in Thailand. A further 4 teaching staff were trained in Public Health and Tropical Medicine while library staff were also trained. Necessary books and journals were added to the Library, and air-conditioning, furniture, books and journals, typewriters, a photocopier and computers were provided. Since 1996, two library staff have attended 2-month training courses in Chiang Mai, while one surgery and one anatomy lecturer were sent to Chiang Mai University for a 10-month training course. A selection of information technology equipment was installed and audiovisual equipment and a video camera repaired. Lecturers are periodically invited from Chiang Mai University for the education of students.

2) A & H Fujimoto Foundation

The Fujimoto Foundation has awarded scholarships to a total of 144 students of the Faculty of Medical Sciences since 1992.

3) Aupelf-Uref (Agence universitaire de la francophonie)

This project has provided assistance in the following areas:

- Donation of medical reference books to new graduates.
- Donation of medical reference books to the library
- CIME (Cursus Integres pour la Mobilite des Etudiants) - a programme started in 1998, through which one student in the 4th year and one in the 5th grade spend a year studying at a French university.
- Training of teaching staff for 3 months in France
- French language training for students.

4) Research Activities

The following research activities are now underway:

a. A study of pregnant women with anaemia in Vientiane Province

The research project was conducted at a District Hospital in Vientiane Province. This was a descriptive cross-sectional study on the prevalence of anaemia and malaria infection among patients at the District Hospital. The prevalence of anaemia among

pregnant women was higher and the major aetiology was presumed to be malaria infection.

- b. Health-seeking behaviour among those caring for children under five years old in Vientiane Municipality

This community-based cross sectional study revealed that the first action taken by the caregiver, if the caregiver is a mother, was giving the child medicine, followed by visiting public hospitals and private clinics. Also, the importance of health education for the caregivers was pointed out.

- c. Care providers' perspectives on reproductive health services for adolescents in the Lao PDR

Attitudes of formal and non-formal health sector staff towards reproductive health issues for adolescents aged between 15 and 24 were studied. This study was a necessary and important contribution to understanding the reproductive health needs of adolescents, since these have not yet been explored, despite the fact that one third of women have their first child before the age of 20 years (UNFPA, 1997).

- d. The early detection of pre-invasive cervical cancer by visual inspection with acetic and lugol iodine.

This research was funded by IARC (International Agency of Research of Cancer) and carried out in collaboration with nine other countries in Asia and Africa.

- e. The establishment of a population-based cancer registry in Vientiane Municipality

This study on the possible establishment of a population-based cancer registry in Vientiane Municipality was also carried out with the assistance of IARC.

10.5.2 College of Health Technology

(1) HISTORY IN BRIEF

The College of Health Technology was established in 1969. It is now the only institution in Lao PDR providing middle-level health worker education. Initially, it offered courses in nursing, laboratory technology and pharmacy. In 1977, the course in rehabilitation and orthopaedics was transferred from the Ministry of Interior and Social Welfare. In 1978, the 3-year medical assistant course was established, while the nursing course was terminated¹⁰. In 1986, the school was renamed the College of Health Technology and the nursing course

¹⁰ After the course termination, nurse education was under the control of Mahosot Hospital until 1985.

started again. In 1987, the hygiene inspector and midwifery sections were established. The midwifery section was combined with the nursing section in 1990. The medical assistants' course was terminated in 1989. The orthopaedic course was also discontinued but reorganized as the physical-therapy course.

(2) CURRENT SITUATION

The College's functions are to:

- Teach and train nurse-midwives, assistant pharmacists, laboratory assistants, physical-therapists, and hygiene inspectors, and to upgrade the English level of health personnel.
- Develop a bachelor's degree programme for College graduates
- Be a training centre for the graduates of the College, Public Health Schools and Nursing Schools
- Conduct Research
- Promote Lao Culture

The college buildings are more than 45 years old but have been partially renovated. Currently, six sections exist: 1) Nursing and midwifery, 2) Pharmacy, 3) Physical-therapy, 4) Laboratory technology, 5) Hygiene inspection, and 6) English. The available courses and number of students are listed in Table 10.12.

Table 10.12 Training Courses of the College of Health Technology

Course	Number of students (approx)	Number of graduates in 2000	Qualification attained
Nursing/Midwifery	227	72	Nurse/Midwife
Pharmacy	90	33	Assistant Pharmacist
Physical therapy	60*	**	Physical-Therapist
Laboratory technology	90	27	Laboratory Assistant
Hygiene inspection	107	35	Hygiene Inspector
English	60*		(Certificate)

Source: Interview at College of Health Technology, 2001

Note: *Approximate number

**Course suspended between 1997 and 1999.

The total number of students is about 623 (female: 400, male: 223). Only approximate numbers were obtained for the enrolment on some courses (so the total number of students in the table may not be accurate). English courses, consisting of 2 beginners' classes and 2 intermediate classes, are available for in-service health staff.

The total number of staff, including both teaching and non-teaching staff, is 68 (2 post-graduate level, 22 high-level, 40 middle-level, and 4 low-level). Table 10.13 shows the number of teaching staff by section.

Table 10.13 Teaching Staff of the Collage of Health Technology

Section		Full-time teacher	Visiting teacher	Total
1	Nursing/Midwifery	10	3	13
2	Pharmacy	6	6	12
3	Physical therapy	10	5	15
4	Laboratory technology	7	11	18
5	Hygiene inspection	4	10	14
6	English	2	2	4
Total		39	37	76

Source: Interview at the College of Health Technology, 2002

The college has recently started a 2-year Bachelor's course for nurses. The major purpose of the course is to provide existing in-service middle-level nurses with higher professional education so that they are qualified to apply for postgraduate education abroad. They are expected to have a role in nurse education in the country in the future. Thirty students began studying in July 2002. The college is also considering establishing bachelor's course for other sections.

(3) BRIEF OVERVIEW OF THE COURSE

1) Nursing/Midwifery

In the Nursing/Midwifery course, the number of students enrolled is 227 (first grade: 75, second: 77, third: 75). There are only 10-15 male students in each grade. Eighty-five percent of students are from the provinces. The 3-year curriculum is outlined in Table 10.14 and Table 10.15 below:

Table 10. 14 Curriculum for Three-Year Nurse Course

Subject	Credit
General Education: 16 credits	
General Psychology	2(2-0-0)
Social Science	2(2-0-0)
Communication	1(1-0-0)
Mathematics	1(1-0-0)
Chemistry	2(2-0-0)
Physics	2(2-0-0)
French 1	2(2-0-0)
French 2	2(2-0-0)
Developmental psychology	2(2-0-0)
Sport	0(0-2-0)
Fundamental Professional Education: 18 credits	
Anatomy/Physiology	6(6-0-0)
Microbiology/Parasitology	2(1-2-0)
Pathology	2(2-0-0)
Pharmacology	3(3-0-0)
Nutrition	2(2-0-0)
Diet therapy	2(2-0-0)
Statistics	1(1-0-0)
Professional Nursing Education: 77 credits	
Nursing 1	6(4-4-0)
Nursing 2	7(3-2-12)
Community Health Nursing Practice	3(0-0-12)
Community Health Nursing 1	3(3-0-0)
Community Health Nursing 2	4(3-0-4)
Obstetrics Nursing 1	2(2-0-0)
Obstetrics Nursing 2	4(3-0-4)
Obstetrics Nursing 3	3(2-0-4)
Obstetrics Nursing 4	3(1-0-8)
Paediatric Nursing 1	4(3-0-4)
Paediatric Nursing 2	4(2-0-8)
Adult Nursing 1	8(6-0-8)
Adult Nursing 2	8(6-0-8)
Mental Health and Psychiatric Nursing	3(2-0-4)
Nursing Ethics	1(1-0-0)
Public Health Sciences	5(4-0-4)
Basic Medical Care	4(4-0-0)
Nursing Administration	2(2-0-0)
Teamwork	2(2-0-0)
Development of Nursing	1(1-0-0)

Explanation of Symbols
Example: Nursing 1: 6(4-4-0)
➤ Number 6 in front of the parenthesis: Indicates total credits for that subject
➤ Number 4 within the parenthesis: Indicates the number of theory learning hours per week
➤ Number 4 within the parenthesis: Indicates the number of demonstration hours per week
➤ Number 0 within the parenthesis: Indicates the number of practice hours per week

Source: The College of Health Technology, 2002

Table 10. 15 Timetable for Three-Year Nurse Course

Teaching and Learning Schedule	Hour/Week		
	Theory	Demonstration	Practice
1st Year (1st Semester: 16 weeks)			
General Psychology	2	0	0
Chemistry	2	0	0
Anatomy/Physiology	6	0	0
Nursing 1	4	4	0
Microbiology/Parasitology	1.5	1	0
Nursing Ethics	1	0	0
Nutrition	2	0	0
French 1	2	0	0
Total	20.5	5	0
1st Year (2nd Semester: 16 weeks)			
Physics	2	0	0
Development of Psychology	2	0	0
Mathematics	1	0	0
Community Health Nursing 1	3	0	0
Obstetric Nursing 1	2	0	0
Social Science	2	0	0
Nursing 2	3	4	8
Pharmacology	3	0	0
Total	18	4	8
2nd Year (1st Semester: 16 weeks)			
Pathology	2	0	0
French	2	0	0
Adult Nursing	6	0	8
Obstetrics Nursing 2	3	0	4
Paediatric Nursing 1	3	0	4
Total	16	0	16
2nd Year (2nd Semester: 16 weeks)			
Basic Medical Care	2	2	4
Communication	1	0	0
Community Health Nursing 2	2	0	0
Diet therapy	2	0	0
Paediatric Nursing 2	2	0	8
Obstetrics Nursing 3	2	0	4
Teamwork	2	0	0
Total	13	2	16
3rd Year (1st Semester: 16 weeks)			
Adult Nursing 2	6	0	8
Community Health Nursing 2	1	0	4
Public Health Sciences	4	0	4
Mental Health	1	0	0
Statistics	1	0	0
Total	13	0	16
3rd Year (2nd Semester: 16 weeks)			
Community Health Nursing Practice	0	0	12
Nursing Administration	2	0	0
Development of Nursing	1	0	0
Obstetrics Nursing 4	1	0	8
Psychiatric nursing	1	0	4
Total	5	0	24

Source: The College of Health Technology, 2002

Hospital based training starts in the second semester of the 1st year and continues until the last semester as follows.

1 st year (2 nd semester)	1 day/week (128 hours/semester)	Medical and surgical ward, obstetric ward for practising basic nursing in Mahosot, and Sethathirath Hospital
2 nd year (1 st semester)	3 days/week (384 hours/semester)	Medical ward, surgical ward, obstetric ward for providing care to specific patients in Mahosot, Sethathirath, Friendship, and MCH Hospitals, and Sikhottabong district hospital
2 nd year (2 nd semester)	3 days/week (384 hours/semester)	Medical ward, surgical ward, paediatrics ward, obstetric ward for providing care to specific patients in Mahosot, Sethathirath, Friendship and MCH Hospitals
3 rd year (1 st semester)	3 days/week (284 hours/semester)	Mahosot Hospital (ENT ward, ER ward, Communicable disease ward, ICU ward, Obstetric ward), Friendship Hospital (Operation room), Eye Treatment Centre, Dermatology Centre, and Rehabilitation Centre
3 rd year (2 nd semester)	Community practice (192 hours/semester, Hospital practice 192 hours/semester)	Selected community, Mahosot Hospital (Obstetric ward, MCH ward, Psychiatric ward, OPD ward), MCH Hospital (MCH ward, Obstetric-gynaecology ward), and Setthathirath Hospital (MCH ward, Obstetric ward)

There are 13 teaching staff (10 female and 3 male). Of 4 high-level staff, two are now on leave to attend Master's courses in Community Health and Nursing in Bangkok. Of the remaining two, one - the course director - worked for 9 years at Mahosot Hospital, before moving to teach at the College in 1981. She has a Bachelor's degree in Nursing Education from Bangkok. The other - the deputy director - graduated from the College of Health Technology, then completed a Bachelor's degree in Nursing Education and a Master's in Nursing Science, also in Bangkok. There are also 9 middle-level staff working as tutors. They are all graduates of the College of Health Technology. In addition, lecturers are invited from Mahosot Hospital, Sethathirath Hospital and MCH Centre.

The main teaching methodology in class is oral instruction. OHP is the only means of supplying visual aids for instruction. Teachers mentioned that they could not prepare lesson sheets to distribute to students because there is only one computer available for 13 staff.

Students do not have their own textbooks, but they are available in the college library. Teachers use Thai textbooks because students easily understand the language and textbooks are available in the library. English and French textbooks are also used sometimes, but there are few Lao textbooks. During clinical practice at the hospitals, students are not supervised sufficiently. Both 2nd and 3rd year students go for practice at the same time. The tutors accompanying them cannot supervise all students at the hospital adequately, while hospital staff tend to be busy with their own duties.

2) Pharmacy

After a 3-year course, whose curriculum is shown in Table 10.16, graduates are qualified as assistant pharmacists. As of September 2001 there were 106 students (35 in the first year, 37 in the second year, 34 in the third year). There are 17 staff (6 permanent and 11 part-time). The most recent graduates are working in hospitals (5), the Department of Food and Drugs (3), pharmaceutical factories (8), and private pharmacies.

Table 10. 16 Curriculum for 3-year Assistant Pharmacist Course

Teaching and Learning Schedule	Total credit	Total Hours		
		Theory	Laboratory	Practice
General Education				
Environmental Hygiene	2	32	0	0
Community Health	2	32	0	0
First aid	2	32	0	0
Social Science	2	32	0	0
Sport	0	20	0	0
Latin language	2	32	0	0
French I, II	7	96	32	0
Mathematics	3	48	32	0
Physics	4	48	32	0
General Chemistry	4	48	32	0
Fundamental Professional Education				
Inorganic Chemistry	4	48	32	0
Organic Chemistry	3	48	0	0
Bio-Chemistry	4	40	48	0
Anatomy/Physiology	3	48	0	0
Bacteriology	3	32	32	0
Parasitology	4	48	32	0
Botanic and Cryptogamy	5	48	64	0
Analytical Chemistry	5	48	64	0
Professional Education				
Drug Control and Analysis	4.5	24	64	96
Pharmaceutical-Chemistry	4	64	0	0
Pharmacology	6	80	0	96
Legislation	5	64	0	96
Pharmaceutical Galenic	10	80	128	96
Pharmacognosy	7	64	64	96
Traditional Medicine	3	32	0	96
Food Safety	3	32	32	0
Total	102	1236	672	576

Source: The College of Health Technology, 2002

3) Physical-therapy

Having been suspended between 1997 and 1999, the 3-year course was restarted in 2000. At present, there are about 60 students. Of 5 teaching staff, only one has clinical experience. The main teaching style is lecturing and note-taking. There are no textbooks available. The course curriculum is outlined in Table 10.17.

Table 10. 17 Curriculum for 3-year Physical-Therapy Course

General Education	Credit	Professional Education			
Social Science	2	Basic Movement Science 1	3	Physical-therapy in Orthopaedic 1	4
Human Science	2	Basic Movement Science 2	3	Physical-therapy in Orthopaedic 2	4
French	4	Material for P.T	1	Physical-therapy in Orthopaedic 3	4
Mathematics	0	Technology 1	4	Physical-therapy in Neurology	3
Fundamental Professional Education		Technology 2	3	Clinical practice in physical-therapy 1	4
Basic Nursing	1	Radiology	2	Clinical practice in physical-therapy 2	5
Hygiene	2	Hydrotherapy	1	Physical-therapy paediatric	3
First Aid	2	Electro and thermotherapy	2	Prosthetics and Orthotics	2
Neuroanatomy	2	Occupational therapy	1	Community Based Rehabilitation	4
Biomechanics	2	Suspension and traction	2	Physical-therapy Ethics and Administration	2
Basic gross Anatomy	8	Physical-therapy in Chest condition	2	Total Credit	98
Physiology	4				
Pharmacology	2				
Surgical Pathology	4				
Medical Pathology	4				

Source: The College of Health Technology, 2002

4) Laboratory technology

Since the 3-year course for laboratory assistants was established, 730 students have graduated. The number of students on the course is 30 per grade. 85% of students have completed upper secondary school, while the remaining 15% of students have had experience of working in health facilities after graduating from lower secondary school. There are 15 teaching staff (7 permanent, 8 visiting). Of a typical graduating class of 30, 15 will usually find jobs at provincial hospitals. Equipment used during the course is very old and often incomplete. Practical training is conducted at central hospitals, blood banks, and the Centre for Malariology, Parasitology and Entomology.

5) Hygiene Inspection

Hygiene inspectors inspect hygiene at factories, schools, markets, restaurants, hotels, and health centres. In addition, they undertake preventive measures such as health promotion, disease prevention and infectious disease control to reduce incidence and morbidity. The 3-year Hygiene Inspectors' Course at the College was established in 1987, since when 349 students have graduated. The teaching staff numbers 16 (4 full-time, 12 part-time). The

students receive practical training at the College and at the Municipality Water Supply Department.

As of September 2001, there were 107 students in total (1st year: 37, 2nd: 34 and 3rd: 36). Almost half the students enter the college through the quota system. Graduates at the central level are working for the Department of Hygiene and Prevention, hospitals, schools and factories, while others are working for District Health Offices and District Hospitals. Graduates of this course have also been very involved in the EPI programme. The curriculum is outlined in Table 10.18.

Table 10. 18 Curriculum for 3-year Course for Hygiene Inspection

Teaching and Learning Schedule	Total credit	Total Hours		
		Theory	Laboratory	Practice
General Education				
Social Science	2	32	0	0
General Psychology	1.5	24	0	0
French	5	80	0	0
Sport	0			
Biology	3	40	16	
Physics	3	40	16	
Chemistry	3	32	32	
Organic Chemistry	2.5	24	32	
Biochemistry	3	32	32	
Fundamental Professional Education				
Anatomy/Physiology	5	64	32	0
Microbiology	3.5	40	32	0
Parasitology	3.5	40	32	0
First Aid and Nursing	5.5	40	16	192
Pharmacology	2.5	32	16	0
Traditional Medicine	2	24	16	0
Semiology	4	48	0	48
Internal Medicine	4.5	56	0	96
Surgical Medicine	3.5	48	0	48
Paediatrics	4.5	56	0	96
Obstetrics-Gynaecology	3.5	6	0	48
Clinical Psychology	2	24	16	0
Othorhinolaryngopathy	2.5	32	0	48
Dermatology	1.5	16	16	0
Communicable Disease	1.5	24	0	0
Tuberculosis	1.5	24	0	0
Malaria Disease	1.5	16	16	0
Professional Education				
Environmental Hygiene	8.5	96	64	48
Labour Health and Industrial Disease	5	56	32	48
Infant and Youth Health	5	56	32	48
Food Sanitation and Nutrition	7.5	96	32	48
Community Health	3.5	48	16	0
Epidemiology	4.5	64	0	48
Hygiene Sanitation	4.5	56	32	0
Health Education	2.5	32	16	0
Mental Health	2	32	0	0
Law and Regulation of Hygiene	1.5	24	0	0
Hygiene Control	1.5	0	0	144
Total	121	1504	544	960

Source: The College of Health Technology, 2002

(4) ISSUES

The issues facing the College can be summarized as follows.

- Many students lack basic ability, especially in basic science and English. In general, students from urban areas have a better grounding than those from more rural areas.
- The student dormitory needs to be improved. About 350 students from the provinces are now living in the dormitory.
- As the grant for quota students is not sufficient to cover basic costs, many students are engaged in part-time employment.
- Some teachers lack sufficient teaching ability and clinical experience.
- School facilities need to be renovated and improved. In particular, classrooms need renovation and the library needs complete redevelopment.
- The hospital based clinical practice is not sufficiently supervised, so the effectiveness of the practice is in doubt.

10.5.3 Public Health Schools and Nursing Schools

In the past, each province had an auxiliary nursing school. Each school had a different length of training and course curriculum, so that the quality of training could not be ensured. Since 1992, these schools have been closed and integrated into 5 schools around the country. In Luangphrabang, Savannakhet and Champasak, the medical assistant schools and nursing schools were merged into the Public Health Schools. In Khammuane and Vientiane (province), auxiliary nursing schools became Nursing Schools.

(1) OVERVIEW

In 1993, the Ministry of Health standardised the curriculum for the 2-year nurse education course. Currently, 4 schools provide the 2-year nurse education course: 3 Public Health Schools in Champasak, Savannakhet, and Luangphrabang; and 1 Nursing School in Khammuane. The major functions of these schools are to:

- Educate auxiliary nurses with the 2-year course according to the standardised curriculum. Entrants to the course have completed at least upper secondary school (11-year education)
- Provide in-service training for existing health staff

The school in Vientiane province, located in Vangvieng, stopped taking new students in 2001 when it moved to Phonhong, the administrative centre for Vientiane Province. The reason for the move was that Vangvieng District Hospital does not have the capacity to be a training hospital. The Provincial Hospital, on the other hand, was recently renovated and has received technical support from the EU and Luxembourg, so that patients come even from the neighbouring provinces.

Recently, the Ministry of Health decided to reopen the school in Oudomxay, which had been closed in 1994. The Oudomxay Public Health School was formally established in January 2002. The school is going to implement a PHC worker training course from September 2002 and then plans to expand its functions in line with the other public health schools.

(2) CURRENT SITUATION

1) Teachers and Students

Table 10.19 show the number of students. Recently, the number of students has been increasing every year. Each school has 2 or 3 classrooms and each classroom is large enough for about 40 students. However, because of the student increase, more than 70 students have to fit into each classroom at present.

Table 10. 19 Number of students in each school (2001/2002)

		Savannakhet		Champasak		Luangphrabang		Khammuane	
1 st year	Female	56	77	87	105	51	76	57	80
	Male	21	1class	18	2class	25	1class	23	1class
2 nd year	Female	39	50	43	56	44	64	49	63
	Male	11	1class	13	1class	20	1class	14	1class
Total	Female	95	127	130	161	95	140	106	143
	Male	32	2classes	31	3classes	45	2classes	37	2classes
No. of Students in Dormitory	Female	65	82	91	117	60	90		
	Male	17		25		30			

Source: Public Health Schools (Champasak, Savannakhet, Luangphrabang) and Nursing School (Khammuane), 2002

Differences between the Public Health Schools and Nursing Schools are apparent in terms of teaching staff (Table 10.20). There are more medical doctors and medical assistants in charge of medical science subjects such as anatomy, pathology and microbiology in the Public Health Schools (Savannakhet, Champasak and Luangphrabang) while there are more nurses in the Nursing School (Khammuane), apparently for historical reasons. However, all schools rely on middle-level nurses to teach professional nursing subjects.

Table 10. 20 Number of staff in each school (2001/2002)

		Savannakhet	Champasak	Luangphrabang	Khammuane
Technical Staff		15	18	19	19
High Level	Postgraduate		2		
	Medical Doctor	5	4	6	1
	Bachelor Nurse	1	1	1	
Middle Level	Medical Assistant	6	1	4	3
	Nurse	2	7	7	9
Low Level	Auxiliary Nurse	1	1		5
Contract Staff			2	3	1
Administration Staff		10	10	5	5
Total		25	28	27	24

Source: Public Health Schools (Champasak, Savannakhet, Luangphrabang) and Nursing School (Khammuane), 2002

2) Teaching/Training

All schools follow the standardised curriculum and timetable as shown in Table 10.21 and Table 10.22. The structure of the curriculum is principally the same as that of the 3-year nurse education course, but with fewer teaching hours.

Table 10.21 Curriculum for Two-Year Auxiliary Nurse Course

Subject	Credit
General Education: 20 credits	
General Psychology	2(2-0-0)
Social Science	10(10-0-0)
Communication	1(1-0-0)
Mathematics	1(1-0-0)
Chemistry	1(1-0-0)
Physics	1(1-0-0)
Foreign Language 1	2(2-0-0)
Foreign Language 2	2(2-0-0)
Fundamental Professional Education: 13 credits	
Anatomy/Physiology	4(4-0-0)
Microbiology/Parasitology	2(1-2-0)
Pathology	2(2-0-0)
Pharmacology	2(2-0-0)
Nutrition	2(2-0-0)
Development of Psychology	1(1-0-0)
Professional Nursing Education: 50 credits	
Primary Nursing 1	4(3-2-0)
Primary Nursing 2	5(3-4-0)
Primary Nursing Practice	4(0-0-16)
Community Health Nursing 1	1(1-0-0)
Community Health Nursing 2	4(2-0-8)
Obstetrics Nursing 1	3(2-0-4)
Obstetrics Nursing 2	5(3-0-8)
Obstetrics Nursing 3	2(0-0-8)
Paediatric Nursing	4(2-0-8)
Adult Nursing	2(3-0-8)
Psychiatric Nursing	1(1-0-0)
Nursing Ethics	1(1-0-0)
Public Health Sciences	3(3-0-0)
Health Education	1(1-0-0)
Primary Treatment	4(3-0-4)
Nursing Administration/Teamwork	2(2-0-0)
Development of Nursing	1(1-0-0)

Explanation of Symbols

Example: Obstetric Nursing 1: 3(2-0-4)

- Number 3 in front of the parenthesis: Indicates total credits of that subject
- Number 2 within the parenthesis: Indicates the number of theory learning hours per week
- Number 0 within the parenthesis: Indicates the number of demonstration hours per week
- Number 4 within the parenthesis: Indicates the number of practice hours per week

Source: MOH, 2002

Table 10. 22 Timetable for Two-Year Auxiliary Nurse Course

Teaching and Learning Schedule	Hour/Week		
	Theory	Demonstration	Practice
<i>1st Year</i>			
(1st Semester)			
General Psychology	2	0	0
Chemistry	1	0	0
Mathematics	1	0	0
Physics	1	0	0
Communication	1	0	0
Anatomy/Physiology	4	0	0
Pharmacology	2	0	0
Primary Nursing 1	3	2	0
Microbiology/Parasitology	1	2	0
Nursing Ethics	1	0	0
Community Health Nursing 1	1	0	0
Nutrition	2	0	0
Foreign Language 1	2	0	0
Social Science	2	0	0
Developmental Psychology	1	0	0
Nursing Development	1	0	0
Total	26	4	0
(2nd Semester)			
Pathology	2	0	0
Primary Nursing 2	3	4	0
Primary Nursing Practice	0	0	16
Obstetric Nursing 1	2	0	4
Social Science 2	2	0	0
Foreign Language 2	2	0	0
Total	11	4	20
<i>2nd Year</i>			
(1st Semester)			
Obstetric Nursing 2	3	0	8
Paediatric Nursing	2	0	8
Adult Nursing	3	0	8
Health Education	1	0	0
Social Science 3	2	0	0
Total	11	0	24
(2nd Semester)			
Community Health Nursing 2	2	0	8
Obstetric Nursing 3	0	0	8
Primary Treatment	3	0	4
Public Health Sciences	3	0	0
Psychiatric Nursing	1	0	0
Nursing Administration/Teamwork	2	0	0
Social Science 4	4	0	0
Total	15	0	20

Source: MOH, 2002

(3) PHC WORKER TRAINING PROJECT

The reorganisation of the nursing schools is aimed at improving the quality of nurses. A major difficulty in achieving this, however, is that, as stated in 10.4.1, in more remote areas, Provincial and District Health Offices tend to recruit local people, who receive only a few months' training. They are then assigned to their local health centres on a contractual basis in order to solve the acute shortage of health centre staff.

As a response to this problem, the Ministry of Health has planned a PHC Worker Development Project, as described in Table 10.23:

Table 10.23 PHC Worker Development Project

Objective	To combat the acute shortage of health workers in remote rural areas and particularly staff shortages in health centres. The project plans to produce 1,000 health workers by the year 2005.
Name of the position	PHC worker
Selection of candidates	The community selects candidates. Candidates are volunteers. Priority is given to "khets" (zones) where a health centre will be built. If there is no candidate in the zone, a candidate from another zone can be nominated.
Length of training	Three years
Education level of candidates	Completed lower secondary school (8 years' education), up to 35 years old.
Implementation	The project is to be piloted in Oudomxay (40 trainees) and Luangphrabang (40 trainees) from September 2002, then extended to other public health schools and nursing schools.
Recruitment	PHC workers will be recruited as health centre staff by MOH

Source: Alain Noel, 2000, op. cit. and latest information from Department of Organisation and Personnel, MOH, 2002

The project was originally supposed to start in 2000, but has been postponed until 2002. The training curriculum has already been developed and teaching staff in Oudomxay and Luangphrabang Public Health Schools have received TOT (Training of Trainer). Although it is planned that existing public health schools and nursing school will handle this project for the time being, the Ministry of Health intends to extend it to Xiengkhuang and Sekong provinces, too.

10.5.4 Medical Assistant Schools

Until 1994, the three Medical Assistant Schools in Luangphrabang, Savannakhet, and Champasak trained medical assistants. Between 1995 and 1996, each was integrated with the auxiliary nursing school in the respective province to become a Public Health School, whereupon no new students were accepted onto the medical assistant course. This reflected a shift of emphasis by the Ministry of Health toward improving the quality rather than the

quantity of health workers. Since the last students of the medical assistant course graduated, these 3 schools have only provided auxiliary nurse education courses

The termination of the medical assistants' course is in line with the Ministry's longer-term aim of replacing medical assistants with medical doctors and middle-level paramedical specialists. The effect of this policy may become more visible in time.

10.5.5 Education for Upgrading

Serving health staff do have opportunities to receive training to upgrade their qualifications. Between 70 and 90 staff receive some upgrade training either in or out of the country every year.

Generally speaking, staff under 36 years old are entitled to apply for Bachelor's or diploma courses which equate to high or middle -level education within Laos. As for postgraduate level, generally staff aged between 35 and 45 can apply for Master's courses; staff of any age can be considered for Ph.D. courses if the educational institute accepts their application.

Within the country, the Faculty of Medical Science and the College of Health Technology accept serving health staff who intend to upgrade their qualifications from middle- to high-level or from low- to middle-level. Under the present system, they start from the first year of the relevant course, so that they have to study for the same period as secondary school graduates. However, from 2002, in-service medical assistants are permitted to enter the 4th grade of the Department of Medicine after taking a 6-month "bridging course" which brushes up their academic knowledge. A similar system will be applied soon for middle-level assistant pharmacists and dentists after approval by MOE. The College of Health Technology has also adopted the same system with a bridging course leading to a 2-year Bachelor's course starting from 2002.

Low-level staff who have not completed upper secondary school are not eligible for upgrade training. They can only receive short-term training.

10.5.6 School of Public Health

The National Institute of Public Health (NIOPH) was established by a Prime Ministerial decree in 1999. It has two main fields of activities:

- Research, with the Council of Medical Sciences (CMS)
- Training, with the School of Public Health (SPH)

The School of Public Health is a section of the National Institute of Public Health (NIOPH). Its major roles are: 1) to develop and run various continuing training courses for health staff,

2) to investigate postgraduate training needs, 3) to develop and implement postgraduate training courses, 4) to provide technical support such as curriculum development and teaching to all health staff training schools in the country, and 5) to carry out quality evaluation surveys of health staff.

The School's teaching and training activities are at the time in a process of development; several activities are already running, others are in process, and a curriculum has been submitted to the MOE for approval.

(1) THE SETTINGS

The School of Public Health presently occupies a two storey building (above the IFMT) and will move in a new three storey building on the same campus. Space for a conference room is limited and most of the present facilities are for the administrative use.

(2) STAFF, TRAINERS AND TRAINEES

There are 2 permanent staff directors, 24 office and technical staff and 15 invited professors and teachers hired from the Ministry of Health.

The School of Public Health plans are to provide:

- Bachelor of Public Health (3 years)
- Training for Trainers (by months)
- Post Graduate Training (by months)
- In-Service Training System (by days), and
- Postgraduate Residency Training (a 2 years Master of Public Health, proposed)

About 30±10 trainees attend each course.

(3) TEACHING AND TRAINING

New teaching facilities are under construction (3 storey building expected to be finished in 2002)

Several specific courses are running or will resume shortly, for example: Bachelor of Public Health (running), Master of Public Health (supported by the French government) to be resumed by 2002); Health Administration Course.

Training courses conducted in the past and planned for the future are summarised below.

1. Master of Public Health: run between 1997 and 2000 with the support of the French government. Fifteen students (14 medical doctors and 1 pharmacist) were taken from Provincial Health Offices and the Ministry of Health. The course was

divided into 15 semesters and was taught in French. With all lecturers coming from France for 2-3 weeks of each semester, the course took 2 years to complete. The course comprised pedagogy of health education, bioscience, epidemiology, health management, and health education and promotion. The school plans to run a similar course to the one in French, but this is still at the planning stage, and sponsors have not yet been identified. Lecturers would be brought from Thailand and the course would last 10 months, potentially starting in 2002 with 15-20 students.

2. Health administration course: a 3-month course jointly funded by ADB and the Ministry of Health. It was run about 6 times between 1995 and 2000 with 30 participants each time. The main participants were directors and deputy directors of Provincial Health Offices and Provincial Hospitals. The school wants to run the course again in the 2001/02 fiscal year, but the necessary funding has not yet been secured.
3. Health project management course: one-month course for health staff responsible for the management of projects (such as EPI and PHC) at provincial and district level. The course has been conducted 3 times so far and each course has had 30 participants.
4. Health education pedagogy course: one-month training of trainers at province level. The course covered curriculum development, topic selection, lecturing, and attitudes towards trainees. The course was run twice before 1999.
5. Short-term training courses on demand: the school also offers 2-3 week training courses when needs arise. The school has, for instance, run courses on health education, health promotion, and administration and management.
7. Bachelor of Public Health and Health Administration: still under consideration by the Ministry of Health. If approved, the course would provide for 30 students to follow a 2-year professional course at the School of Public Health after first having studied for 3 years in the Faculty of Foundation Studies at the National University of Laos.

(4) ISSUES

The School's major difficulty is that it has to depend almost totally on external teaching staff and funding for its activities. The School will start a new era of its own development with the availability of all new facilities including classrooms and teaching materials. Funding will remain uncertain, and more staff are needed.

10.5.7 Francophone Institute of Tropical Medicine

The Francophone Institute of Tropical Medicine in Vientiane (IFMT) has been running 2-year postgraduate courses for graduates of the Faculty of Medical Sciences since 1999. It is supervised by the Agency for Francophone Universities (AUF) - an NGO based in Quebec. The objectives of AUF are as follows:

- To establish a postgraduate programme in tropical medicine
- To conduct high quality research on critical health problems in Asia.
- To study strategies for the development of public health services in Asia.
- To collaborate with other countries and donors.

The 20 trainees accepted each year must pass an examination in French. AUF also conducts other health-related activities in Lao PDR. For example, in August 2001, a health forum entitled “Functions of medical directors in the clinical field at district hospitals” was held.

The 2-year course has a common core of one year and two options during the second year. The 52 Francophone country members recognize this diploma.

- Option 1: Healthcare: for trainees following the Diploma of Advanced Professional Studies (DEPA) (planning, implementing, managing, supervising and evaluating an integrated service or a project/programme; care, control or prevention of one or several priority tropical pathologies, whilst taking into account local constraints and the national healthcare system; Healthcare infrastructures, public and private, at all levels and collaborating organisations, including bi- and multilateral and NGOs)
- Option 2: Research: for trainees studying for the Diploma of Advanced Research Studies (DERA, Equivalent to a Masters degree) (designing, implementing, managing, evaluating and capitalising the results of a research project; involving one or several priority tropical pathologies, relevant to local healthcare priorities and scientifically valid; Research Institutes, Universities, Pharmaceutical industry)

10.5.8 Other Training Opportunities

There are other kinds of training opportunities. Some form components of certain projects or programmes, while others are initiated by the Ministry of Health with financial support from donors or NGOs. The following are a few examples:

- Training of trainers in the MCH programme (funded by UNFPA)
- Postgraduate courses in surgery at Mahosot Hospital (funded by CCL)
- Training courses for provincial hospital staff at Mahosot Hospital
- Training courses for doctors from district hospitals at Sethathirath Hospital (part of JICA’s technical cooperation)
- Intensive training courses in paediatrics and obstetrics for auxiliary nurses at the College of Health Technology (part of GTZ project in Bolikhamxay)
- Training course in prosthetic and orthotic service (supported by COPE)

10.5.9 Quota System and Access to Tertiary Education

(1) GENERAL OVERVIEW OF THE QUOTA SYSTEM

Entrance to the existing three health worker training schools as well as to other vocational/technical schools and higher education is governed by a quota system. In addition to quotas for upper secondary school graduates, quotas for current health staff wanting to upgrade their qualifications are available at the Faculty of Medical Science and the College of Health Technology.

The quota system works as follows: firstly, Provincial Health Offices submit both proposals for training places for current staff nominated to upgrade and requests for places for future health staff. Secondly, the Department of Health Personnel and Organisation in the Ministry of Health collates proposals from all the provinces, which it then submits to the Department of Vocational Training and Higher Education (DVTHE) in the Ministry of Education. DVTHE is responsible for distributing quota places according to the capacity of the training schools and the available budget¹¹. Upper secondary school graduates are allocated places by provincial education directors while the Provincial Health Office decides which staff go to upgrade training. Table 10.24 shows the distribution of quota places by province.

¹¹ Tuition is free for quota students: an allowance is provided for high school graduates through the Ministry of Finance while existing government staff continue to receive their salary during their training.

Table 10. 24 Quota Distribution by Provinces 2000-2001

(1) Faculty of Medical Science, National University

Province	General Medicine		Dentistry		Pharmacy	
	New graduates from Upper Secondary School	Current government staff	New graduates from USS	Current government staff	New graduates from USS	Current government staff
Vientiane Municipality	1		1		1	
Phongsaly			1			
Luangnamtha	1					
Oudomxay	1					
Bokeo			1			
Luangphrabang	1					
Huaphanh			1			
Xayaboury					1	
Xiengkhuang					1	
Vientiane	1		1			
Bolikhambay	1		1			
Khammuane						
Savannakhet	1		1			
Saravane					1	
Sekong						
Champasak	1		1			
Attapeu					1	
Xaysomboun Special Region	1		1			
Total enrolment through quota	9	7	7*	10	5	13
Enrolment through examination	24		13		12	
Total enrolment	40		30		30	

Source: Department of Vocational, Technical and Higher Education (DVTHE), Ministry of Education

(2) College of Health Technology

Province	Nurse		Others	
	New graduates from USS	Current government staff	New graduates from USS	Current government staff
Vientiane Municipality	1		3	
Phongsaly	1			
Luangnamtha	1			
Oudomxay	1			
Bokeo	1		1	
Luangphrabang	1		2	
Huaphanh	1		1	
Xayaboury	1		2	
Xiengkhuang	1		2	
Vientiane	1		3	
Bolikhambay	1		1	
Khammuane	1		1	
Savannakhet	1		3	
Saravane	1			
Sekong	1			
Champasak	1		3	
Attapeu	1			
Xaysomboun Special Region	1			
Total enrolment through quota	18	22	22	32
Enrolment through entrance examination	20		36	
Total enrolment	60		90	

Source: Department of Vocational, Technical and Higher Education (DVTHE), Ministry of Education

(3) Public Health Schools & Nursing Schools

Province	Luangphrabang		Khammuane		Savannakhet		Champasak	
	New graduates from USS	Current government staff	New graduates from USS	Current government staff	New graduates from USS	Current government staff	New graduates from USS	Current government staff
Vientiane Municipality					6			
Phongsaly	3							
Luangnamtha	3							
Oudomxay	3							
Bokeo	3							
Luangphrabang	8							
Huaphanh			3					
Xayaboury			3					
Xiengkhuang			5					
Vientiane			6					
Bolikhambay					5			
Khammuane			3					
Savannakhet					6			
Saravane							5	
Sekong							4	
Champasak							7	
Attapeu							4	
Xaysomboun Special Region					3			
Total enrolment through quota	20	0	20	0	20	0	20	0
Enrolment through entrance examination	20		20		20		20	
Total enrolment	40		40		40		40	

Source: Department of Vocational, Technical and Higher Education (DVTHE), Ministry of Education

For the 2001-2002 academic year, a total of 2,721 quota places were available for all subjects for new upper secondary school graduates, of which 141 places (5%) were for health staff training schools. For existing government staff, 84 places were provided at health training schools or 10% of the total of 826 places. It is not known why the quota for existing staff in each province remains unfilled. It can, however, be concluded that very few quota places are available for each province

(2) MAIN ISSUES

Students entering through the quota system are in theory obliged to go back to their province to work after completing their studies, but this rule is not strictly enforced. The original idea of the quota system was to ensure the regular supply of technical and professional personnel to the public sector in provinces with chronic staff shortages. However, having studied in Vientiane, many students do not return to their home provinces. In Vientiane, some of them work as interns or part-time staff with lower salaries at hospitals or central institutes in the hope of getting permanent positions, and some even find jobs in non- health-related fields. This obviously represents wastage of human resources and of the initial investment in their professional training.

It is also questionable whether the quota system actually succeeds in its stated aim of enabling promising local students to gain access to further or higher education. It appears that high school students from provinces with records of higher educational attainment sometimes intentionally transfer to more remote and potentially less 'competitive' provinces in order to improve their chances of gaining a quota place. Understandably such students may be reluctant to work in their 'adopted' province after they finish their studies.

Another question relates to the transparency of the student selection procedure. Some staff in the health training schools suggest that students who gain entrance through the examination are stronger than those who come through the quota system.

The last issue concerns the accessibility and affordability of tertiary education for people in the provinces. In more remote provinces in the north and south, a very limited number of children make it to upper secondary level, as shown in Table 10.25. The number of girls completing upper secondary school is even more limited. Among these few, it is not certain how many students have either the desire or the capability to become health staff. In addition, under the present system, health worker training schools are only available in Vientiane Municipality, Luangphrabang, Vientiane Province, Khammuane, Savannakhet and Champasak. This geographical limitation might discourage students in more remote provinces from entering these schools, largely for economic reasons.

It should be noted in particular that the closure of provincial auxiliary nursing schools and the raising of entrance requirements threaten to restrict opportunities for female students in more remote areas who do have the desire to train and work as nurses in their own areas. This will potentially have an adverse effect on the supply of nurses to remote areas.

Table 10.25 Completion of Upper Secondary Education by Provinces (1996-97)

Province	Upper Secondary School graduates*	
	Total	Female
Vientiane Municipality	4,092	1,972
Phongsaly	92	34
Luanqnamtha	110	36
Oudomxay	118	35
Bokeo	86	26
Luanqphrabang	482	212
Huaphanh	205	94
Xayaboury	660	203
Xiengkhuang	113	23
Vientiane	1,317	546
Bolikhambay	432	171
Khammuane	495	191
Savannakhet	1,503	586
Saravane	203	59
Sekong	34	15
Champasak	1,421	512
Attapeu	86	24
Xaysomboun Special Region	65	5
Total	11,514	4,744

Source: Ministry of Education, Annual Bulletin, 1996-1997

Note: *The figures only include graduates from general upper secondary education.

Students from ethnic minorities are further disadvantaged. Opportunities to enter health staff training schools are extremely limited. In the 1st Health Forum, some participants suggested that special quota places should be provided for ethnic minority students. This opinion is worth taking into consideration.

10.6 FINDINGS ABOUT HEALTH WORKERS

Through this Study, the MOH-JICA Study Team visited several provincial and district hospitals. Some important findings relevant to human resources development are summarised below:

- In Luangphrabang Provincial Hospital, there are staff with knowledge of ethnic minority languages in each section. This is a good strategy to solve communication problems with ethnic minority people.

- In some provincial hospitals, the standard of nursing practice is very low. Training is often quickly forgotten, which means that there is little potential for transferring skills. Many are not capable of using medical equipment.
- The range of work being performed by medical assistants and nurses is very wide, especially at district level. Medical assistants are acting as a medical doctors and nurses substitute for medical assistants or other paramedical staff. In one district, medical assistants usually examine outpatients while 2 high-level staff are performing administrative duties in the District Health Office and one doctor is responsible for the MCH section. The surgery section of the hospital in this district is staffed only by nurses, who perform minor surgery. The conclusion is that clear job descriptions are necessary.

10.7 HUMAN RESOURCES DEVELOPMENT PLAN IN THE HEALTH SECTOR

The Ministry of Health declared its commitment to human resource development at the Ministry of Health Round Table Meeting in Vientiane in May 2000.

The importance of Human Resource Development (HRD) was recognised, and it was admitted that in the past, investment in HRD has not been sufficient, leading to a shortage of qualified staff.

The following issues were identified at a Meeting for the 5-year plan for 2001-2005¹²:

1. Main problems encountered in HRD
 - The quality of training courses is still low.
 - The proportion of trained staff is too low.
 - Lack of foreign language ability
 - There has been a lack of investment in basic necessary materials and equipment at training institutions.
 - The facilities for practical training for students are not well equipped (staff, material and equipment).
 - Lack of management and coordination in different training courses.

2. Policy

To provide efficient and effective pre-service and in-service training for health staff relevant to the needs of the population.

3. Strategies

- Review/develop the training curriculum
- Develop postgraduate training in different fields
- Provide teaching materials and vehicles to health training institutions

¹² Ministry of Health: *Health Strategy up to the Year 2020*, Vientiane, 2000

- Develop English training courses at different health training institutions
- Integrate planning, monitoring and evaluation between different projects in order to avoid overlapping, to have appropriate participants and in order to economise.

4. Targets

- At central level and in the larger provinces, there will be specialists in surgery: 57, anaesthesia: 57, internal medicine: 10, tropical medicine: 31, obstetrics and gynaecology: 13, paediatrics: 35, and public health: 60.
- At central level hospitals, regional hospitals and the laboratory of the Epidemiology Centre, 41 Laboratory assistants trained to Bachelor's degree level should be in post.
- Train 595 staff locally
- Train 135 staff abroad
- Health training institutions will have up-to-date training and teaching materials and vehicles to facilitate practical fieldworks for students and teachers

5. Plans

- Train laboratory assistants up to Bachelor's degree level at the College of Health Technology
- Continue the existing postgraduate training courses in surgery, anaesthesia, paediatrics, tropical medicine and public health
- Look to initiate postgraduate training courses in internal medicine and obstetrics and gynaecology.
- Provide in-service training for staff abroad by using Government budget and grants from international organisations.
- Supply equipment and teaching materials to health training institutions
- Organise English courses in public health and nursing schools (Luangphrabang, Vientiane, Savannakhet, and Champasak) and in the College of Health Technology.

Based on the 5-year plan of the Ministry of Health, the Department of Organisation and Personnel has made the Health Personnel Development Plan 2001-2005. Table 10.26 shows the plan and actual implementation by 2002.

Table 10. 26 Health Personnel Development Plan 2001-2005 and its implementation by 2002

No.	Subject Title	Number of Existing Staff	Time and Number of Staff				Location				Budget		
			2001		2002		Total	National	Regional	International	Amount	Unit	Donor
			Plan Implemented	2001	Plan Implemented	2002							
A.	Post Graduate												
1	Emergency Operation	29	20	0	0	20	0	60	M/H / FMS	1,045,000	FF	GF	
2	Anastasia	1	20	0	0	20	0	60	M/H / FMS	1,232,162	FF	GF	
3	Gynaecology-Obstetric	7	20	0	0	20	0	40	M/H / FMS				
4	Paediatric	9	20	5	0	20	0	50	FMS				
5	Internal Medicine	12	20	0	0	6	0	46	FMS				
6	6.1 Master Nurse	2	2	2	2	2	5	18		770,000	US\$	WHO	
	6.2 PhD Nurse	0				1	1	3					
7	Science												
	7.1 - Haematology	0		1		Not yet	1	2	2	6			
	7.2 - Biochemistry	0		1		Not yet	1	2	2	6			
	7.3 - Bacteria	2		1		Not yet	1	2	2	6			
	7.4 - Virology	0		1		Not yet	1	2	2	6			
	7.5 - Immunology	1		1		Not yet	1	2	2	6			
	7.6 - Parasitology	5		1		Not yet	1	2	2	6			
	7.7 - Fungology	0		1		Not yet	1	2	2	6			
	7.8 - Food Analysis	5		1		Not yet	1	1	4				
	7.9 - Disease Anatomy	0		1		Not yet	1	2	2	6			
	7.10 - Gene	0		1		Not yet	1	1	4				
8	Ray												
	8.1 - X-Ray	1		1		1	1	2	2	7			
	8.2 - Treatment by Ray	0				2		2	4				
	8.3 - Ultrasound	0		1		0	1	2	2	6			
	8.4 - CT Scanner	0		1		0	1	1	4				
	8.5 - Endoscopy	0		1		2		1	6				
9	Tropical Medicine	17	10	10	10	10	10	70	FITM				
10	Dentist	1	5	1	4	Not yet	2	3	1	16	150,000	US\$ Not	
11	Pharmacology	0	3	1	3	3	3	3	19				
12	Eye	3	4	0	4	3	4	4	23	OpC			
13	ENT	3	2	2	2	2	2	2	14				
14	Public Health Management	36	15	0	3	15	15	3	15	66	NIOPH		
15	PHC Management	5	3	1	3	Not yet	3	3	16				
16	Nutrition	3	1	0	1	0	1	1	5				
17	Information Technology	0	1	0	1	0	1	1	5				
18	Medical Economics	2	1	0	1	0	1	1	5				
19	Environmental Sanitation	5	1	0	1	1	1	1	6				
20	Epidemiology	6	1	1	1	1	1	1	5				
21	(Chemistry, Physics,	0		1		0	1	1	3				
22	Population	2	1	1	1	Not yet	1	1	6				
23	Medical Education	0	1	2	1	1	1	1	8				
24	Medical Law	0	0	0	0	0	2	0	2				
Total		157	151	26	52	91	66	166	77	629			

No.	Subject Title	Number of Existing Staff	Time and Number of Staff						Location			Budget	
			2001		2002		Total	National	Regional	International	Amount	Unit	Donor
			Plan	Implemented	Plan	Implemented							
B.	Bachelor/High Level												
1	Medical Science (11+7)	1,356	30 (MOE)	30 (MOE)	30	30	150 FMS						
2	Medical Science (upgrading)	0		30	30	150 FMS							
3	Nursing (11+5)	1			30	30	60 CHT / FMS					372,006,000 Kip	GOL
4	Nursing (upgrading)	11	0	30	30	120 CHT						29,000 US\$	WHO
5	Nurse-Midwife (*11+3)	672	0	78	109	0	252 CHT					60,585,000 Kip	GOL
6	Laboratory Science (upgrading)	0	20	0	20	0	60 CHT					64,368,000 Kip	GOL
7	Laboratory Science (*11+3)	281	70	35	28	0	168						
8	Pharmacology (11+6)	241	30 (MOE)	30 (MOE)	30	30	150 FMS						
9	Pharmacology (11+3)	227	70	39	109	0	253 CHT					46,918,000 Kip	GOL
10	Pharmacology (upgrading)	0	0	0	0	0	40 CHT						
11	Physiotherapy (*11+3)	181	70	29	35	0	134 CHT					99,326,000 Kip	GOL
12	Physiotherapy (upgrading)	0	0	20	0	0	40 CHT						
13	Hygiene (*11+3)	157	70	37	30	0	172 CHT					46,918,000 Kip	GOL
14	Dental Study (11+6)	53	40 (MOE)	30 (MOE)	30	30	160 FMS					330,000 US\$	Not
15	Public Health	0	20	0	20	20	100 NIOPH						
Total		3,180	420	218	415	356	160	240	200	2,009			

No.	Subject Title	Number of Existing Staff	Time and Number of Staff						Location			Budget	
			2001		2002		Total	National	Regional	International	Amount	Unit	Donor
			Plan	Implemented	Plan	Implemented							
C.	Vocational Education Middle and Low Level												
2	Technical Nurse-Midwife (11+2), New curriculum 1993	180	232	180	343	180	1,475 Khm-N, Svk-PHS, Chp-PHS					22,251,600,000 Kip	GOL
3	Nurse Assistant (6 months-2 years course before 1993)	4,781	0	0	0	0	0 in all provinces in the past						
5	Nurse Assistant (8+3)	0	0	150	0	150	600 Lpb-PHS, Svk-PHS, Chp-PHS						
6	Laboratory Science (*11+2)	0	0	0	0	60	120 Lpb-PHS, Svk-PHS, Chp-PHS					80,130,000	
8	Radiology (*11+2)	0	0	0	0	20	20 CHT						
11	Pharmacy (11+2)	0	0	0	0	30	60 CHT						
12	Hygiene (11+2)	0	0	0	0	60	120 Lpb-PHS, Svk-PHS, Chp-PHS						
12	PHC Staff (*8+3)	0	200	0	200	200	1,200 Khm-N, Svk-PHS, Chp-PHS, Lpb-PHS, Vvn-N, Ody-PHS					11,000,000,000 Kip	GOL
Total		4,781	380	232	530	543	700	530	680	3,595			

Note 1: * The number of existing technical nurse (11+2) is included in the number of existing nurse assistant. It cannot be separated yet.

Note 2:

MH: Mahosot Hospital
FMS: Faculty of Medical Sciences
FITM: Francophone Institute of Tropical Medicine
NIOPH: National Institute of Public Health
Opc: Optamology Centre
CHT: College of Health Technology
Khv-N: Khammouane Nursing School
Svk-PHS: Savannakhet Public Health School
Lpb-PHS: Luangphabang Public Health School
Vvn-N: Vangvieng Nursing School
Ody-PHS: Oudomxay Public Health School
Xkg: Xiengkhuang
Skg: Sekong

Source: MOH, 2002

10.8 IDENTIFIED ISSUES

The identified issues of human resource development in the health sector are:

1. Health personnel are distributed very unevenly both among and within provinces, and this is a substantial issue which needs to be addressed. A uniform approach cannot solve the problem.
2. Deploying qualified personnel to remote health centres is difficult. Staff do not want to be posted to remote areas for a number of socio-economic reasons. Rotation and incentive systems should be considered.
3. The morale and motivation of health staff in rural areas is not high. While it is not easy to increase salaries for staff in remote areas, incentives could take other forms, such as providing a better working environment, regular office supplies, appreciation from society, and regular supervision from the Provincial and District Health Offices.
4. The range of work performed by medical assistants and nurses is very wide, especially at district level. Medical assistants are acting as a medical doctors and nurses substitute for medical assistants or other paramedical staff.
5. It is difficult to standardise the quality of service delivery and to provide appropriate in-service or refresher training given the variations in professional and educational background.
6. The closure of provincial auxiliary nursing schools and higher enrolment requirements for the present nursing schools might adversely affect the supply of auxiliary nurses in the short- and medium-term. For the time being, training for “under-qualified” auxiliary nurses is urgently needed.
7. In order to solve the acute shortage of health centre staff, the Provincial and District Health Offices train people for several months and then employ them in their local health centres, threatening to reverse the improvements made in the quality of health centre staff.
8. Deployment of medical doctors and middle-level paramedical specialists to the provincial and district levels seems not to have progressed on a large scale, meaning that the shortage of these staff in rural areas will continue for the foreseeable future. Refresher and upgrade training for existing medical assistants should be priorities in the meantime.
9. The current conditions in rural areas suggest that “highly qualified generalists with skills and knowledge of specific field are more needed now.
10. Since the three Medical Assistant Schools in the provinces closed, middle- and high-level health personnel are now only trained in Vientiane Municipality. This threatens to accelerate the concentration of health personnel in Vientiane. Establishing affiliated schools of the Faculty of Medical Science and the College of Health Technology in the provinces might be worth considering.

11. The quota system, which is supposed to ensure a regular supply of technical and professional staff to the provinces, does not work efficiently. Some graduates of health worker training schools do not go back to their provinces, yet no strict monitoring system has been established. The fairness and transparency of the quota system are also open to question.
12. Ethnic minorities and girls are most underprivileged in terms of access to education. As a result, very few can become health personnel and so serve their own communities. In order to improve services to remote areas, the introduction of a special quota system should be considered.
13. Improvement of access to general education is a prerequisite for increasing the quality of health personnel.
14. Short-term training courses rely substantially on financial support from donors, and so are not currently sustainable.
15. Physical conditions of education institutes for health workers are not conducive to providing quality education. For example, in the Department of Medicine (Faculty of Medical Science), currently accepting more than 100 students every year, classroom capacity and available educational equipment has not increased since the Department received only about 30-40 students per year.
16. Thorough knowledge of and proficiency in English and French are very important for the effective study of medicine and future professional development. Foreign language education should be promoted.
17. To improve the quality of medical education, teaching aids such as colour slides and models of human body are important.
18. The need for postgraduate education and training is growing. In Lao PDR, postgraduate medical training did not exist before 1997. In 1997, a postgraduate paediatrics residency programme was established in the Department of Medicine. The Department of Medicine is trying to add more programmes in other clinical fields. At Mahosot Hospital, a post-graduate residency programme in surgery and anaesthesiology has begun. The hospital plans to expand this programme to other specialities.

CHAPTER 11 DRUGS

11.1 INTRODUCTION

Prior to 1987, most drugs in Laos were obtained from socialist countries, either by purchase or as a grant or loan. With the introduction of the New Economic Mechanism (NEM) in 1987, this system started to break down prompting the Ministry of Health to procure drugs from other sources. To ensure the availability of safe quality drugs at affordable prices, a variety of measures have been implemented. These include the establishing of state-owned pharmaceutical factories, the establishment of private factories, the adoption and implementation of the National Drug Policy, the authorisation of private pharmacies, and the introduction of revolving drug fund systems.

11.2 ORGANISATION

The Food and Drug Department (FDD) of the Ministry of Health (MOH) is responsible for drug matters. FDD consists of 7 divisions (Food Control, Drug Control, Narcotics and Psychotropic control Inspection, Food and Drug Inspection, Information Education Communication, Administration, and Programme Management Unit) and it has 42 employees including 7 contracted workers. The affiliated agencies of FDD include the Food and Drug Quality Control Centre, Medical Product Supply Centre (MPSC), the Traditional Medicine Research Centre (TMRC), and Pharmaceutical Factories No.2 and No.3. At the provincial level, the Food and Drug Section within each Provincial Health Office (PHO) is responsible for drug purchase, inspection of factories and pharmacies, inspection of drug imports, and supervision of the revolving drug funds.

To tackle issues surrounding narcotic drugs, the Lao government has established an inter-ministry commission, the Lao National Commission for Drug Control and Supervision (LCDC), of which the MOH is a member.

11.3 NATIONAL DRUG POLICY

The National Drug Policy was approved in 1993 with the following two main goals:

1. To ensure the availability of safe quality efficacious essential drugs at affordable prices to those who need them;
2. To ensure the rational use of drugs.

In the 1980's, serious problems occurred in the pharmaceutical sector. Uncontrolled private pharmacies and drug vendors spread rapidly throughout the country and the improper use of drugs became widespread. Dangerous and substandard drugs appeared in the private sector, while public facilities lacked essential drugs. In order to tackle these problems, the National Drug Policy was developed by the Lao government in close co-operation with the Swedish International Development Agency (Sida) and approved by the Lao Prime Minister in 1993.

The National Drug Policy covers the following 13 issues:

1. Drug legislation and regulation
2. Drug selection
3. Drug nomenclature (Drug denomination)
4. Drug registration and licensing for sale
5. Drug procurement
6. Financial resources
7. Drug distribution and storage
8. Quality assurance of drug substances and pharmaceutical specialities
9. Rational drug use
10. Drug advertising and promotion
11. International technical co-operation
12. Traditional medicine
13. Drug monitoring and evaluation

Since its approval, the Lao government has been working to strengthen the institutional framework for the implementation of the National Drug Policy with the support of international donor agencies. Sida assisted in establishing a Drug Quality Control Centre and has supported 5 projects in the areas of drug quality, proper drug use, traditional medicines, managing drug supply, and strengthening the institutional framework for the National Drug Policy. The World

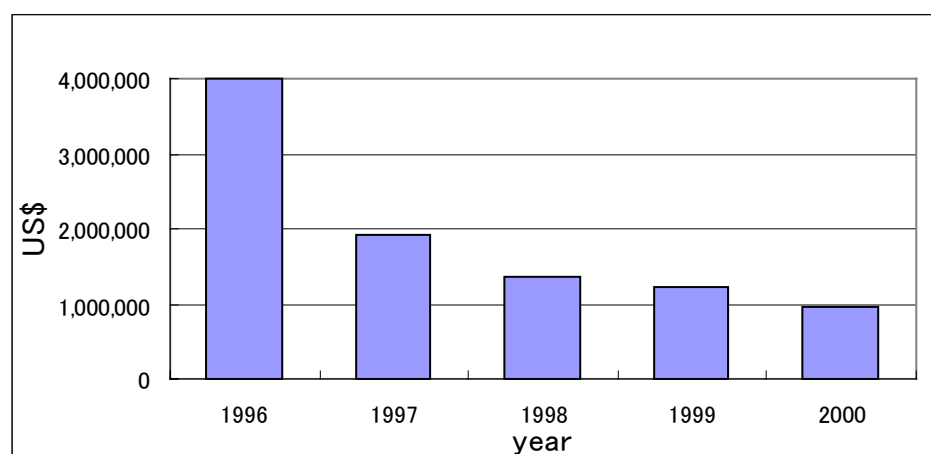
Health Organisation (WHO) has also provided a range of technical support including training on good manufacturing practice (GMP).

11.4 DRUG SUPPLY SITUATION

11.4.1 General Situation

Currently, the countrywide need for essential drugs can be met by a combination of local production and import. Prior to 1987, Laos depended heavily upon drug supplies from socialist countries but these have rapidly decreased since the last cargo container arrived from the Soviet Union in 1989. From 1985, the Lao government started to set up factories for local manufacturing. Although the country has been importing drugs from neighbouring countries such as Thailand and Vietnam, the share of these imports has been decreasing year by year.

Figure 11.1 Imported Drugs Value in Lao PDR



Source: Food and Drug Department, MOH. September 2001.

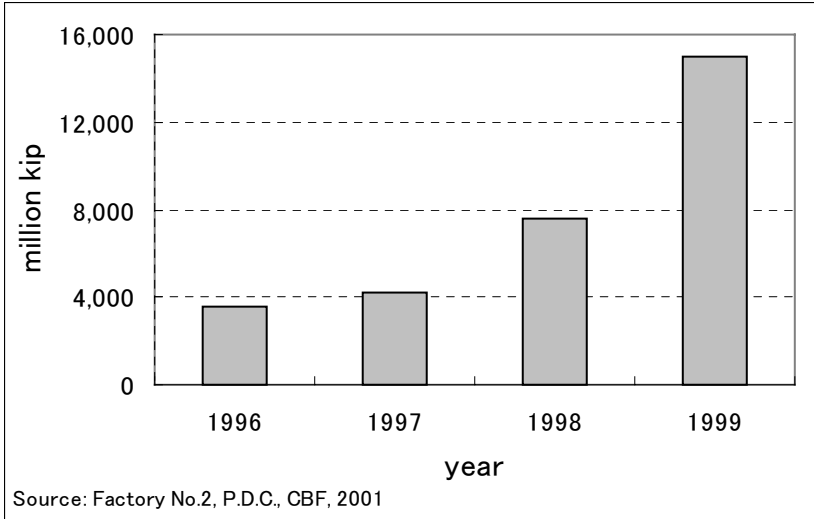
11.4.2 Drug Manufacturing

There are currently six pharmaceutical factories in Laos. Two of these are state-owned but under a self-financing system with staff salaries not paid by the government.

1. Factory No.2 – resumed operation in 1986.
2. Factory No.3 (PDC) – established in 1987
3. CBF (Champasak Binding Factory) – Vietnam and Lao joint venture factory
4. Chongnang (Louangnamtha) – Chinese venture factory
5. KPN (Kampheng Nakhone Phathana) – Lao-Vietnam joint venture factory in Vientiane Municipality
6. Sinya Lao-China Factory – Lao Army-Chinese joint venture

The national policy is to ensure the provision of safe quality, low-cost essential drugs. Drug imports from Thailand are usually expensive in comparison with those manufactured locally. There are many cases in which low-cost drugs are imported without registration and these are difficult to control. The Lao government has been carrying out a policy of favouring and protecting locally manufactured drugs against imports and this is in accordance with the general policy to promote domestic industries in Laos. As a result, outputs of local factories have been steadily increasing.

Figure 11.2 Pharmaceutical sales volume for 3 main factories



Source: Food and Drug Department, MOH. September 2001.

11.5 DRUG PROCUREMENT AND DISTRIBUTION SYSTEM

11.5.1 Public Sector

(1) Central Level

Until 1999, drug procurement for public health facilities was made at the central level. Once purchased, these drugs were distributed to each province. However, this system did not work well according to provincial health offices, resulting in many complaints such as insufficient quantity, bad drug selection and bad timing for distribution. In line with the decentralisation of governmental institutions, the MOH decided to delegate drug procurement and the accompanying governmental budget to the provinces in 1999.

At the moment, revolving drug funds (RDFs) are already in place in most provincial hospitals district hospitals and village health units as part of the user charge scheme. Essential drugs are purchased through this fund and drugs provided by the government

are added into the drug stock and given free to those exempted from paying the user charge, namely the poor and civil servants.

In the vertical programmes, such as EPI, malaria and birth-spacing, drugs are purchased by each programme and stored at the Thatluang Warehouse. Each programme manages procurement and distribution separately, whilst sharing the responsibility for storage with the Medical Products Supply Centre (MPSC).

(2) Provincial Level

Since 1999, the procurement of drugs within the government budget has been carried out at provincial level. In addition, the Provincial Food and Drug Unit is responsible for procurement of drugs for revolving drug funds. Good management skills are required for this system, but these skills vary amongst provinces. This can be partly explained by the disparity in the quantity of manpower allotted to Food and Drug Units between provinces.

Table 11.1 Staff number of Food and Drug unit in each Province

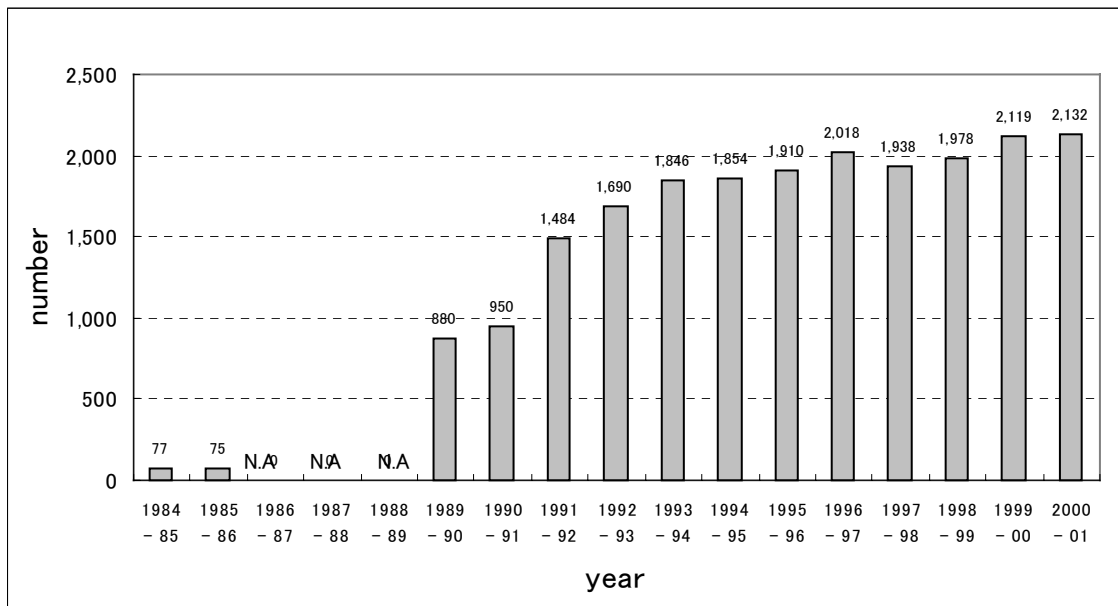
Province	Pharmacist	Assistant Pharmacist	Others	Total
1. Vientiane Municipality	11	17	28	56
2. Phongsaly	6	11	8	25
3. Luangnamtha	3	9	18	30
4. Oudomxay	8	8	14	30
5. Bokeo	6	4	2	12
6. Luangphrabang	13	9	8	30
7. Houaphanh	3	5	21	29
8. Xayaboury	4	7	6	17
9. Xiengkhouang	2	0	9	11
10. Vientiane Province	10	6	4	20
11. Bolikhamxay	5	8	8	21
12. Khammuane	10	9	37	56
13. Savannakhet	17	14	27	58
14. Saravane	9	10	29	48
15. Sekong	6	5	3	14
16. Champasak	14	13	52	79
17. Attapeu	6	8	3	17
18. Xaysomboun Special Region	2	4	1	7
Total	135	147	278	560

Source: Food and Drug Department, MOH. September 2001.

11.5.2 Private Sector (Pharmacies)

It was not until the mid-1980's that private pharmacies were authorised in Laos and the country saw a rapid increase in the number of private pharmacies in the 1990's.

Figure 11.3 Number of Pharmacy 1984-2001



Source: Food and Drug Department, MOH. September 2001.

According to the qualification of the owners, private pharmacies are divided into these three categories:

Table 11.2 Three Categories of Private Pharmacies

Category	Licensee	Condition	Number of Pharmacies
Pharmacy 1	Pharmacist	Retired person	26
Pharmacy 2	Assistant Pharmacist	Retired person	156
Pharmacy 3	Others	Retired person	1,950
TOTAL			2,132

Source: Food and Drug Department, MOH. September 2001.

The MOH is conducting training for health personnel and drug sellers on the rational use of drugs. Observing the uneven distribution of pharmacies both between regions and between categories, as well as an increase in the number of pharmacies headed by those with little knowledge about drugs, the Lao government in 1998 declared a policy to gradually reduce the number of pharmacies categorised as Pharmacy 3. For example, in Oudomxay, only pharmacists are allowed to set up a new pharmacy and those

pharmacies run by non-pharmacists may not be passed on from the present owner to their children.

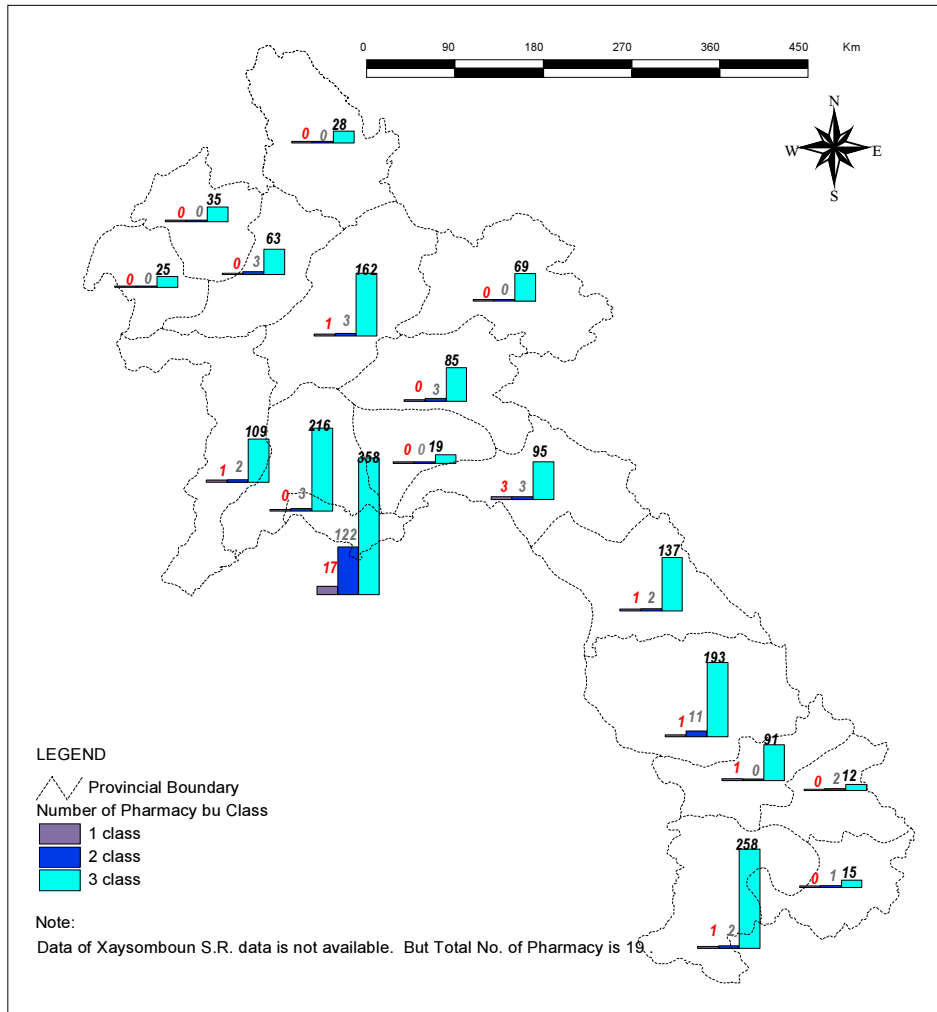
Furthermore, even in the case of pharmacists, the government has adopted a stricter position and set a minimum requirement of 5 years' working experience in a governmental institution. The majority of existing pharmacies belong to the category of Pharmacy 3 and serve as crucial retailers of drugs throughout the country. The number of pharmacies varies between districts and the reduction of Pharmacy 3-type pharmacies could seriously affect accessibility to drugs for people in remote areas. As a result, the FDD is now considering what measures to take.

Table 11.3 Number of Pharmacies by Grade, by Manager Level, in Each Provinces

Provinces	Pharmacy Grade				Manager level								
	1	2	3	Total	Pharmacist	Assistant Pharmacist	Low grade Pharmacist	Medical Doctor	Medical Assistant	Nurses	Traditional healer	Others	Total
1. Vientiane Municipality	17	122	370	509	17	122	55	31	103	168	10	3	509
2. Phongsaly	0	0	28	28	0	1	4	1	3	13	0	6	28
3. Luangnamtha	0	0	35	35	0	0	2	0	0	33	0	0	35
4. Oudomxay	0	3	61	64	0	3	8	1	16	36	0	0	64
5. Bokeo	0	0	25	25	0	0	0	1	3	21	0	0	25
6. Luangphrabang	1	3	164	168	1	3	10	2	30	119	1	2	168
7. Houaphanh	0	0	72	72	0	1	17	0	7	47	0	0	72
8. Xayaboury	1	2	109	112	1	2	1	0	19	89	0	0	112
9. Xiengkhouang	0	3	85	88	0	4	13	0	8	63	0	0	88
10. Vientiane	0	3	216	219	0	7	5	2	37	164	0	4	219
11. Bolikhamxay	3	3	97	103	3	4	8	1	15	70	0	2	103
12. Khammuane	1	2	103	106	1	2	9	0	5	89	1	0	107
13. Savannakhet	1	11	196	208	1	11	11	3	35	147	0	0	208
14. Saravane	1	0	91	92	1	2	9	2	8	69	0	0	91
15. Sekong	0	2	12	14	0	2	1	0	4	6	0	1	14
16. Champasak	1	2	252	255	1	2	3	1	18	124	0	106	255
17. Attapeu	0	0	15	15	0	0	1	0	5	9	0	0	15
18. Xaysomboun Special Zone	0	0	19	19	0	0	0	0	1	18	0	0	19
Total	26	156	1,950	2,132	26	166	157	45	317	1,285	12	124	2,132

Source: Food and Drug Department, MOH. September 2001.

Figure 11.4 Number of Pharmacies by Grade in Each Provinces



Source: Food and Drug Department, MOH. September 2001

11.6 RATIONAL USE OF DRUGS

Even if drugs are available at affordable prices, they can do more harm than good if not used correctly. In order to avoid such risks, it is essential to develop treatment guidelines, essential drug lists and drug formularies, and to ensure that medical care is given in accordance with these guidelines.

In Laos, the Ministry of Health established the National Standard Treatment Guidelines in 1995 with the co-operation of Sida, and it is now under revision. However, treatment guidelines specific to different levels (regional hospitals, provincial hospitals, district hospitals and health centres) have not yet been developed.

It is of a vital importance that not only health workers at public health facilities but also workers at private pharmacies should have knowledge of rational drug use. Sida has already been working on this issue by developing educational materials and introducing a monitoring system using indicators specially developed for the rational use of drugs.

11.7 LAO ESSENTIAL DRUG LIST (LEDL)

The Lao Essential Drug List (LEDL) was originally created in 1978 and revised in 1994 following the approval of National Drug Policy. In 1997, the LEDL was again revised and 261 items are currently listed. Although the LEDL is to be revised every two years, it was still under revision as of September 2001. All health facilities are advised to select drugs based on the LEDL but some public facilities use drugs that are not included on this list as some of the drugs provided by donors are not on the LEDL.

**Table 11.4 Number of Essential Drugs Recommended for
Different Levels of Health Facilities**

Level	Internal / External Medicine	Injection / Fluid	TOTAL
Central Hospitals	160	123	283
Provincial Hospital	141	107	248
District Hospital	84	69	153
Health Centre	29	9	38
Village Drug Kit	23	0	23

Source: Essential Drug List 1997, Food and Drug Department. MOH

11.8 REVOLVING DRUG FUND (RDF)

11.8.1 Development of Revolving Drug Funds in Lao PDR

Before 1999, when the policy of free care was still in place, drugs were provided for free by the government. However, the quantity of drugs was insufficient and most drug supplies dried up after three to four months. After 1987, when private pharmacies were authorised, doctors wrote prescriptions when drugs were out of stock, which the patients purchased at private pharmacies.

It is said that the first revolving drug fund was introduced in Laos by the Comité de Co-operation avec le Laos (CCL) and Médecins sans Frontières (MSF) Belgium to district hospitals in Champasak as pilot projects. In 1993, the Lao government officially approved the RDF system, which allows for exemptions for poor people and civil servants. The MOH-SRC-UNDP implemented RDFs on a large scale in Luangphrabang, Oudomxay, and Huaphanh in 1994.

The National Guidelines on Revolving Drug Funds and Public Health Facilities was developed in 1993 and approved by the MOH in 1996 after some revision. In 1997, the second edition was produced. The RDF Guidelines contain sections on drug selection, payment, pricing, supply systems, exemptions and management systems.

The main purpose of the RDF is to improve access to essential drugs, especially for the poor. In July 2001, provincial-level meetings were held in the north, the centre and the south in order to evaluate the implementation of the RDFs. Various issues including exemption criteria, the role of the RDF committees and drug flow were also discussed.

11.8.2 System

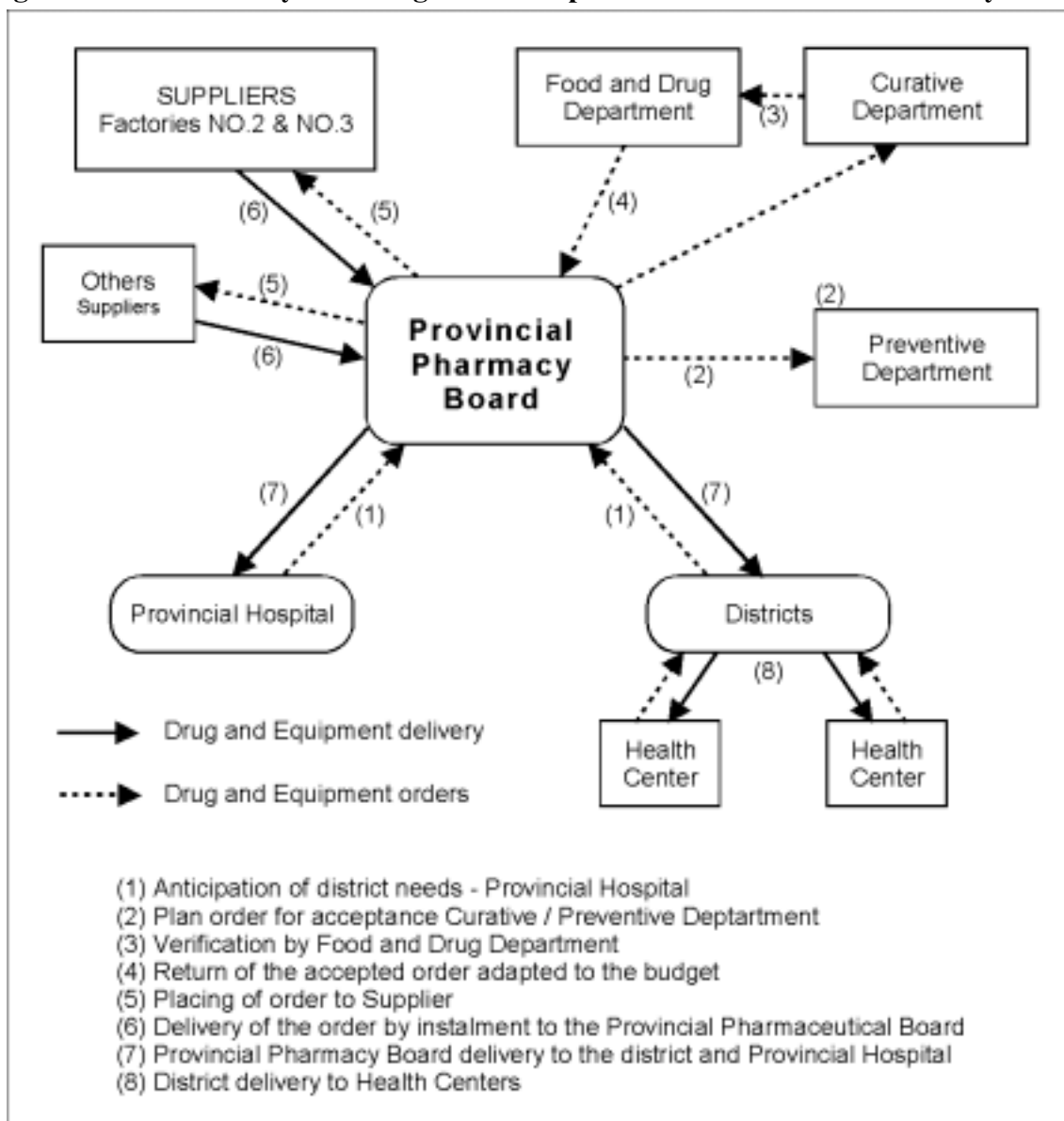
The RDF is the system whereby the revenue generated by the sale of drugs to patients is used to purchase new drugs. RDF is a system for providing safe quality drugs at affordable prices and is part of wider user-charge schemes. After the introduction of the RDFs, exemption was applied to the poor, civil servants (including the retired) and their families (children under 18 and spouse), trainees and students, monks and novices. The sum of free health care for those exempted is compensated for by the national endowment. However, in reality, many RDFs suffer from a lack of funds and there have been calls to reconsider the existing unclear exemption criteria.

11.8.3 Pricing and Procurement

The National Guidelines on Revolving Drug Funds and Public Health Facilities set the maximum sale price at 125% of the purchase price, of which 5% allows for transportation, 10% for loss, inflation and safety margin, and another 10% for management costs. According to the Guidelines, the management of RDF is under the overall control of each provincial health

office. There are two ways of procuring drugs. One is through the Provincial Health Office (PHO), and the other is by health facilities such as provincial and district hospitals. An example of the first is the case of Attapeu where the Food and Drug Unit of the PHO has an overall responsibility for procuring all drugs for the entire province.

Figure 11.5 RDF Money and Drug Flow –Responsible for Provincial Pharmacy Board.

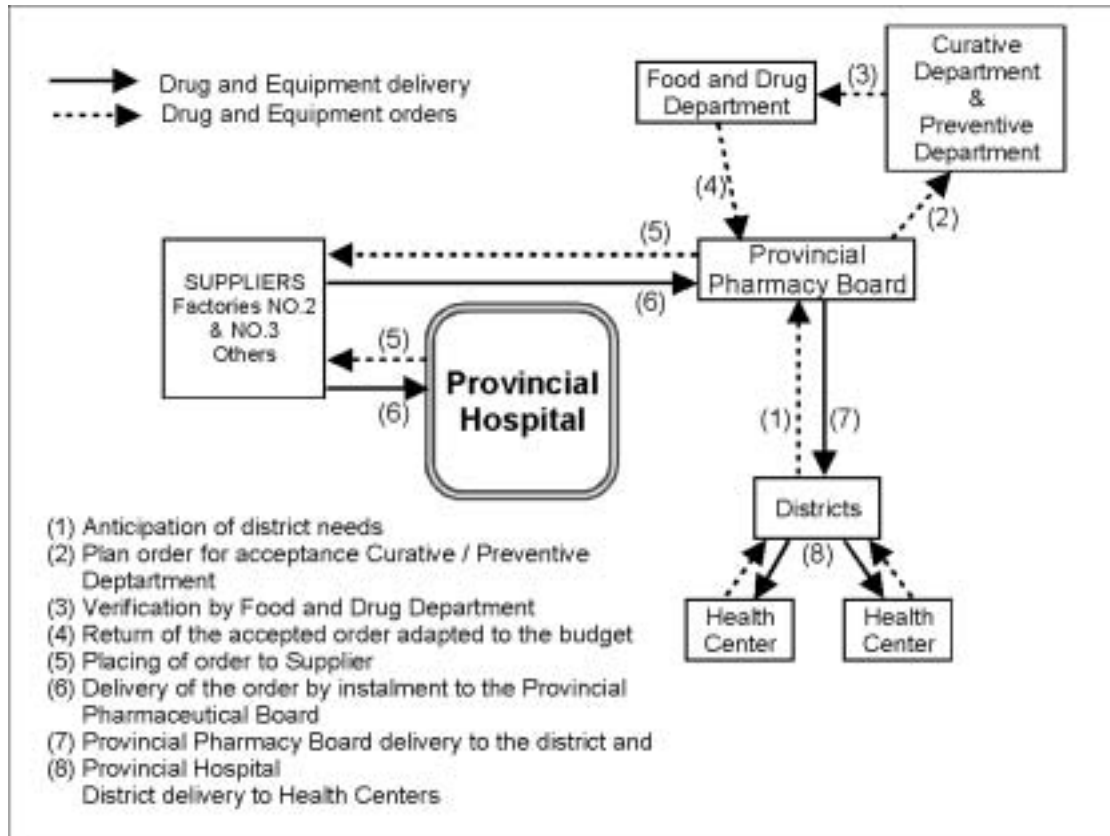


Source: 2nd Edition, National Guideline on Revolving Drug Fund Public Health Facilities. July 1997. National RDF Committee, MOH

Provincial hospitals such as those in Luangphrabang and Savannakhet have introduced a more comprehensive user-fee scheme, consisting of revolving drug funds and other user charges, such as laboratory tests and X-ray, which gives them greater autonomy. Some hospitals purchase drugs directly from pharmaceutical factories.

The fact that the unit price of drugs is lower for bulk orders works to the advantage of large facilities where a large quantity of drugs is consumed. Therefore drug prices are higher at some smaller public health facilities than at private pharmacies.

Figure 11.6 RDF Money and Drug Flow – Provincial Hospital Independent Pattern



Source: JICA Study Team. September 2001.

In this way, the term RDF sometimes refers to RDF alone, but it also covers a variety of user charge systems, resulting in confusion and misunderstandings about what it is.

MOH is trying to standardise the system of drug supply and purchase including pricing rules, and to introduce the system nationally. In the system, drug supply and purchase are to be centralized at PHO as a focal point through the vertical line. PHO collect requests from all levels of RDFs and purchase necessary amount of drugs for whole province. Accordingly, district hospitals, health centres, and VHV's have to procure drugs from DHO or Health Centres, and Provincial Hospitals and DHOs have to procure drugs from PHO. The system aims to control quality of drugs and to apply same prices of drugs throughout a province. MOH has been implementing pilot projects in some provinces, however there are difficulties to operate the system, because of lack of provincial budget for drug purchase, delay of drug supply, lack of warehouse of PHO, etc.

11.8.4 Organisation

According to the MOH guidelines on RDF , the RDFs are to be managed by committees established at all levels. However, as the guidelines do not define the terms of reference of each committee, attendance at the regular meetings is usually low causing many problems in the management of RDFs. Another hindering factor is that their meeting costs are often not covered by the RDF since the Guidelines do not state whether or not they can be included in the administration fee.

According to the FDD of MOH, the management skills for RDF at the provincial level are greatly influenced by the manpower allocated to the Food and Drug Unit of PHO and the availability of donor support.

11.8.5 Implementation

As of August 2001, the RDFs were in place at 17 out of 18 provincial hospitals, 118 out of 142 district hospitals (83%), and 491 out of 565 district hospitals. At village level, the figure is 11%.

Table 11.5 Operating Revolving Drug Fund in Each Level.

Name of Province	Existing number				Existing RDF operating number			
	Province	District	HC	Village	Province	District	HC	Village
1. Vientiane Municipality	1	9	36	489	1	9	36	0
2. Phongsaly	1	7	13	613	1	6	11	0
3. Luangnamtha	1	5	10	531	1	5	10	145
4. Oudomxay	1	7	41	910	1	6	41	25
5. Bokeo	1	6	17	397	1	5	14	10
6. Louangphrabang	1	11	45	930	1	11	45	0
7. Huaphanh	1	8	18	884	1	4	18	153
8. Xayaboury	1	10	54	549	1	10	54	0
9. Xiengkhuang	1	7	41	742	1	6	41	90
10. Vientiane	1	11	11	531	1	7	11	0
11. Bolikhamxay	1	6	25	396	1	4	25	210
12. Khammuan	1	9	49	801	1	8	42	187
13. Savannakhet	1	15	84	1,543	1	14	59	296
14. Saravane	1	8	24	718	1	6	20	25
15. Sekong	1	4	7	249	1	3	3	58
16. Champasak	1	10	58	908	1	9	35	70
17. Attapeu	1	5	20	208	1	5	20	51
18. Xaysomboun Special Region	1	4	12	129	0	0	6	0
Total	18	142	565	11,528	17	118	491	1,320

Source: Food and Drug Department, MOH. September 2001.

11.8.6 Village-Level Revolving Drug Fund (RDF)

Village-level RDFs (V-RDFs) in Lao PDR have been introduced and expanded since the middle of 1990s by donor projects. In the areas with donor support, access to drugs even in areas without health facilities has been improved and the system is enduring somehow.

However, in expanding the V-RDFs, issues have appeared such as:

- weak supervision and management by districts because of lack of budgets, vehicles, and staff capacity
- irrational use of drug and injections at villages
- management capacity of VHVs and village health committees/village authorities
- VHVs' incentives
- the drug supply system at district level
- higher drug prices in remoter areas

The donor projects have developed their own independent systems of village-level RDF so that there are various practices and standards in the country.

In July 2002, MOH started a project to unify the system and to expand V-RDFs nationally, targeting 5,400 villages by 2005. MOH's unified system has been drafted based on UNICEF's system and the training for Provincial and District staff has been carried out by MOH.

11.9 TRADITIONAL MEDICINE

Laos has rich natural resources, and traditional beliefs are still embedded in every aspect of daily life. Since the introduction of western medicine, the country has committed itself to the integration of traditional and western medicine. The promotion of traditional medicine use is a declared policy of the Lao government; the National Drug Policy states that one of its aims is “to develop and promote traditional medicines for disease prevention and health care”

The Institute of Traditional Medicine was established in 1976 for this purpose and later renamed the Traditional Medicine Research Centre (TMCR). The TMCR consists of 4 departments (Administration, Pharmacology, Plant Phytochemistry, Product Testing) and has 46 employees. The TMCR activities include mapping medicinal herbs and plants using the Geographic Positioning System (GPS), establishing national gardens for traditional herbs and plants, and collecting and classifying information on traditional remedies kept in the temples. Together with traditional medicine hospitals and Pharmaceutical Factories No.2 and No.3, the TMCR is also working on the production of traditional medicine and its use in actual treatment. The TMRC works closely with the Traditional Medicine Divisions in 11 provinces.

In Lao villages, there are traditional healers (including both herbalists and spiritualists). The skills and knowledge vary between these healers, and all these traditional practices are handed down to their children and disciples. The TMRC is considering establishing a health education centre for healers, but this is yet to be carried out.

Table 11.6 Pharmacies by Each District in 2001(1)

No.	Districts	1class	2class	3class	Total
I. Vientiane Municipality					
1	Chanthabuly	6	25	58	89
2	Sikhottabong	1	27	59	87
3	Saysettha	1	23	59	83
4	Sisattanak	3	22	49	74
5	Nasaythong	0	12	6	18
6	Xaythany	6	10	47	63
7	Hadxayfong	0	3	29	32
8	Sangthong	0	0	36	36
9	Pakgneum	0	0	15	15
Total		17	122	358	497
II. Phongsaly					
1	Phongsaly	0	0	8	8
2	Mai	0	0	2	2
3	Khoua	0	0	8	8
4	Samphanh	0	0	3	3
5	Bountai	0	0	2	2
6	Bounneua	0	0	4	4
7	Yord-Ou	0	0	1	1
Total		0	0	28	28
III. Louangnamtha					
1	Namtha	0	0	23	23
2	Sing	0	0	3	3
3	Long	0	0	2	2
4	Viengphoukha	0	0	5	5
5	Nalea	0	0	2	2
Total		0	0	35	35
IV. Oudomxay					
1	Xai	0	3	22	25
2	La	0	0	3	3
3	Namor	0	0	5	5
4	Nga	0	0	7	7
5	Beng	0	0	9	9
6	Houn	0	0	13	13
7	Parkbank	0	0	4	4
Total		0	3	63	66
V. Bokeo					
1	Houaxai	0	0	14	14
2	Tonpherng	0	0	4	4
3	Merng	0	0	0	0
4	Pha Oudom	0	0	3	3
5	Parktha	0	0	4	4
6	Mamyu	0	0	0	0
Total		0	0	25	25
VI. Louangphrabang					
1	Louangprabang	1	3	41	45
2	Xiengngern	0	0	14	14
3	Nan	0	0	9	9
4	Park Ou	0	0	12	12
5	NamBark	0	0	24	24
6	Ngoy	0	0	17	17
7	Parkxeng	0	0	11	11
8	Phonexay	0	0	7	7
9	Chomphet	0	0	2	2
10	Viengkham	0	0	17	17
11	Phoukhoun	0	0	8	8
Total		1	3	162	166
VII. Huaphanh					
1	Xam Neua	0	0	22	22
2	Xiengkhor	0	0	6	6
3	Viengthong	0	0	8	8
4	Viengxai	0	0	11	11
5	Houameung	0	0	5	5
6	Xamtai	0	0	7	7
7	Sampbao	0	0	6	6
8	Aad	0	0	4	4
Total		0	0	69	69
VIII. Xayabouly					
1	Xaiyabouly	0	2	22	24
2	Khop	0	0	7	7
3	Hongsa	0	0	6	6
4	Ngeun	0	0	4	4
5	Xienghon	0	0	8	8
6	Phieng	0	0	18	18
7	Parklai	0	0	24	24
8	Kandthao	0	0	10	10
9	Bortand	1	0	8	9
10	Thongmixai	0	0	2	2
Total		1	2	109	112
IX. Xiengkhuang					
1	Peak	0	3	41	44
2	Kham	0	0	14	14
3	Nonghead	0	0	11	11
4	Khoun	0	0	4	4
5	Meuang Mok	0	0	3	3
6	Phoukoun	0	0	9	9
7	Phaxay	0	0	3	3
Total		0	3	85	88

Table 11.6 Pharmacies by Each District in 2001(2)

No.	Districts	1class	2class	3class	Total
X. Vientiane					
1	Phonehong	0	0	41	41
2	Thoulakhom	0	0	24	24
3	Keo Oudom	0	0	22	22
4	Kasy	0	0	15	15
5	Vangvieng	0	0	24	24
6	Feuang	0	0	25	25
7	Xanakhamh	0	0	22	22
8	Mat	0	0	4	4
9	Hinherb	0	0	9	9
10	Viengkham	0	3	13	16
11	Longsane	0	0	13	13
12	Mom	0	0	4	4
Total		0	3	216	219
XI. Bolikhamxay					
1	Parkxanh	2	0	32	34
2	Borlikhanh	0	1	14	15
3	Thaphabart	0	0	9	9
4	Parkkading	0	0	7	7
5	Khamkert	1	2	28	31
6	Viengthong	0	0	5	5
Total		3	3	95	101
XII. Khammuane					
1	Thakhet	1	2	58	61
2	Mahaxai	0	0	11	11
3	Nongbok	0	0	14	14
4	Hinboune	0	0	26	26
5	Yommalart	0	0	13	13
6	Boualapha	0	0	5	5
7	Nakai	0	0	4	4
8	Xebangphai	0	0	3	3
9	Xaibouathong	0	0	3	3
Total		1	2	137	140
XIII. Savannakhet					
1	Khanthabouly	1	8	50	59
2	Outhoumphon	0	1	25	26
3	Art saphangthong	0	2	4	6
4	Phin	0	0	12	12
5	Xepon	0	0	12	12
6	Nong	0	0	3	3
7	Thapangthong	0	0	8	8
8	Songkhon	0	0	27	27
9	Champhon	0	0	16	16
10	Xonbouly	0	0	8	8
11	Xaibouly	0	0	13	13
12	Vilabouly	0	0	3	3
13	Art Saphon	0	0	3	3
XIV. Salavane					
14	Xaiphouthong	0	0	3	3
15	Tahphalanh	0	0	6	6
Total		0	0	9	9
XV. Sekong					
1	Lamam	0	2	7	9
2	Kaleum	0	0	0	0
3	Duckjeung	0	0	0	0
4	Thateang	0	0	5	5
Total		0	2	12	14
XVI. Champasak					
1	Pakse	1	2	54	57
2	Xanasomboun	0	0	35	35
3	Vachienchalerns	0	0	16	16
4	Pakxong	0	0	24	24
5	Pathoumphone	0	0	15	15
6	Phonthong	0	0	19	19
7	Champasak	0	0	21	21
8	Sukhuma	0	0	30	30
9	Mounlapamoak	0	0	18	18
10	Khong	0	0	26	26
Total		1	2	258	261
XVII. Attapeu					
1	Saysettha	0	0	4	4
2	Samakhyxai	0	1	9	10
3	Sanamxai	0	0	2	2
4	Sanxai	0	0	0	0
5	Phouvong	0	0	0	0
Total		0	1	15	16
XVIII. Xaysomboun Special Region					
1	Xaisomboun				
2	Longxan				
3	Hom				
4	Thathom				
5	Phoun				
Total					19

Source: Food and Drug Department MOH, September 2001

CHAPTER 12

HEALTH EDUCATION

12.1 INTRODUCTION

The main causes of mortality and morbidity among children in Lao PDR are malaria, acute respiratory infection, diarrhoea, and epidemic diseases such as dengue fever, measles and meningitis. Health education is recognised as a key activity in tackling these diseases, and this is reflected in several priority programmes - primary health care, malaria/ dengue control, ARI, diarrhoea disease control and other maternal care programmes – in which health education will play a major role in improving preventive behaviour.

By addressing such topics, this chapter intends to collect information on health education, leading to more carefully targeted planning in the health sector in future.

12.2 HEALTH-RELATED KNOWLEDGE IN LAOS

It has been difficult in the past to assess the knowledge of health issues among Lao people throughout the country since only partial surveys have ever been carried out, some concentrating only on a target district or villages where project activities have been taking place. Therefore people's awareness of issues surrounding even common diseases such as malaria, ARI, and diarrhoea, and road accidents, is not understood in any great detail.

Nevertheless, the studies which have been done reveal some interesting information. For example, while 83.8% of people questioned in one survey knew that the vector for malaria is the anopheles mosquito, 24.6% believed that drinking unboiled water can cause malaria and 11% believed that malaria was caused by forest spirits, since malaria symptoms most commonly occur after returning from the rice field ¹.

Women's knowledge about malaria prevention is high. A total of 60% women of reproductive age surveyed answered that malaria could be prevented by sleeping under a bed net at. This suggests that educational programmes should focus on the value of impregnated nets, rather than using a net per se².

¹ CIEH, 1994, KAP survey on IEC in Savannakhet, Luangphrabang and Sekong province.

² 1999, Project Preparatory Technical Assistance (PPTA)

The KAP Communication study showed that villagers can recognise different types of diarrhoea, and that each type can be treated in its own traditional way. However, correct oral rehydration therapy, by increased fluid intake and continued feeding, including breast-feeding, was practised by a meagre 24%.

Women’s knowledge about the EPI programme was low; only 25% of women knew that three vaccine doses were required to protect their child against diphtheria, pertusis and tetanus³.

A comparison of the KAP survey and that carried out for mothers and guardians in 4 villages in the JICA pilot district (where?) and another 4 villages selected for reference in Phonsay district of Luangphrabang suggests that knowledge of MCH and EPI services from district hospitals had improved in the space of 2 years in Chomphet district, but was little changed in Phonsay district⁴, as can be seen from Table 12.1 below.

Table 12.1 Changes in knowledge of immunisation and MCH services provided by district hospitals in Luangphrabang province, 1999-2001

Description	CHOMPHE		PHONSAY	
	1999	2001	1999	2001
Knowledge of EPI service from DH	129(78.2%)	174(95.1%)	103(79.8%)	107(76.4%)
Knowledge on MCH service from DH	141(85.5%)	173(96.1%)	96(74.4%)	98(73.7%)
Knowledge of purpose of immunisation	165(86.7%)	183(94.5%)	129(78.3%)	140(82.9%)

12.3 MOH RESPONSE ON HEALTH EDUCATION

12.3.1 Centre of Information and Education for health

(1) Background

In 1989, the Institute of Information and Education was established as a separate division of the Department of Hygiene and Disease Prevention, and in 1990 was renamed the Centre of Information and Education for Health (CIEH).

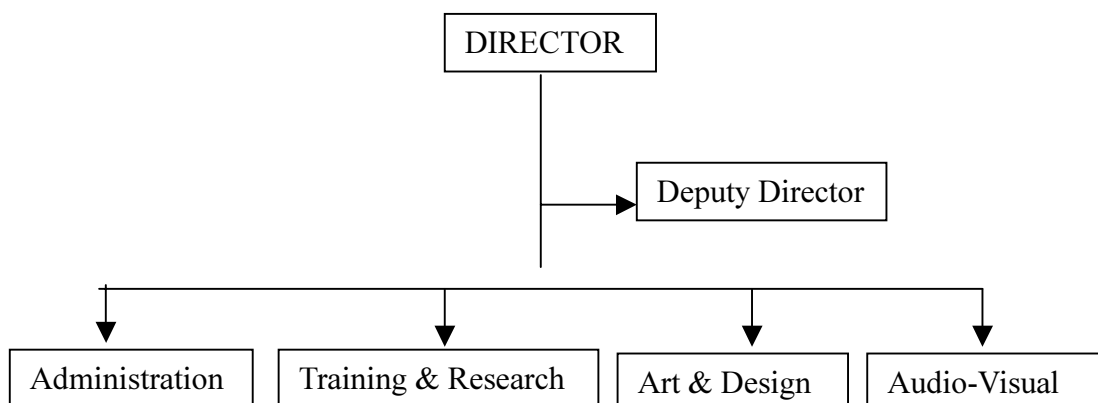
Reflecting the focus of health policies disease prevention and health promotion, CIEH is recognised as an important component of MOH’s 8th work plan o, and is responsible for conducting health education activities in support of each MOH programme and in order to improve people's health status.

³ 1999, PPTA

⁴ MCH, 2001, KAP survey on immunisation and MCH service from district hospitals

(2) Organisational structure and roles

CIEH has 4 main divisions: Administration, Training and Research, Art and Design and Audio-Visual. Each division has its own roles and duties but is ultimately under the direction of this Centre.



In total, CIEH has 31 staff, of whom 15 have high-level education, 7 middle-level and 9 low-level.

The roles and responsibilities of CIEH as agreed and adopted are as follows⁵:

- Act as a spokesperson for MOH on health issues,
- Co-ordinate and co-operate with other sectors, both local and international, for health promotion and disease prevention,
- Develop health education materials and support all health programmes of MOH,
- Improve health education knowledge for staff in all health facilities at all levels,
- Monitor and evaluate health education and information activities.

Some of the major constraints which CIEH work under are as follows:

- The health education network is not active.
- A lack of audio-visual materials means that people in remote rural areas especially cannot access health information.
- There are only very limited health education materials in local languages.
- Health information reporting systems do not exist.
- Low quality of staff for the implementation and management of health education activities.

⁵ CIEH, 2000, Roles and responsibilities

- Shortage of budget (Government budget and subsidies) for carrying out activities.

(3) Existing CIEH Programmes

CIEH is responsible for 3 programmes, namely the Health Promotion in Schools, Tobacco Control Programme and Health Education Programme, which have had varying degrees of success.

1. Health Promotion in Schools (HPS)

A school health promotion project in 1993 was the starting point for the development of a health promotion programme, through training activities jointly carried out with the Ministry of Education, and supported by WHO. Further support to this programme was given in 1994-1995 for three schools in Vientiane municipality. The programme has shown very positive results and it was planned to expand this initiative to selected 6 schools in each of 6 provinces in 1998 and 6 schools in each of two provinces by 2001.

The programme's objectives are to develop capabilities for school health promotion, develop strategies and programmes for health promotion in schools with interaction between schools and families, promote a health-supportive school environment through basic sanitation and promote health services in schools.⁶

In 1998, a programme review meeting between CIEH, WHO and NAM SAAT was organised in order to evaluate the programme activities. The meeting showed that HPS and Nam Saat were working in similar areas but had had no co-ordination (CIEH focused on software development while NAM SAAT focused on hardware development in schools in a different target area)

Follow the meeting, CIEH and NAM SAAT jointly planned and selected target areas in order to strengthen the software development in line with hardware development activities at school level.

Lessons learned:

- Set a clear programme policy and indicators for evaluating the implementation of activities.
- Strengthen monitoring activities for all provincial level networks where the programme exists.
- Strengthen community, local authority and schoolteacher involvement for sustaining the results of the programme.

⁶ WHO, 1996, Health promotion in schools, Guideline on Health promotion in schools , volume 5.8P.

- Co-ordinate and co-operate with Namsaat and the Non-formal Education Department (Ministry of Education) on planning, carrying out and evaluating the programme.

Develop standard information related to health promotion issues to be inserted into the primary and junior secondary curricula.

2. Tobacco Control Programme (TCP)

TCP started in 1994 with the support of ADRA and WHO.

The programme focused on how to control the consumption of tobacco and to reduce smoking in all sections of the population, particularly young women and youths. At the same time, priority was given to efforts to reduce the import of cigarettes, thereby allowing relevant ministries to co-ordinate tobacco control activities.

In 1995, the first survey of smoking was conducted in 4 Vientiane hospitals (Mahosot, Sethathirath, Friendship and 103), 10 Elementary schools and among vehicle mechanics⁷. (Source: National Policy on Tobacco Control in Lao PDR –2001)

Tobacco control is considered an important task, which will have a long-term effect on health and relates to the work of various ministries. A National Co-ordination Committee will therefore set up, pending approval by MOH, to supervise the implementation of plans and policies within this project⁸. The Committee will have a duty to inspect, monitor and promote work implementation by every labour-unit under its responsibility. The co-ordination and co-operation between different sectors have benefited the programme, enabling participating organisations to identify the social health problems caused by tobacco consumption and to draft regulations on tobacco control together.

Lessons learned:

- Legislation on tobacco control is urgently required.
- Dissemination of National Tobacco Policy to all ministries, and departments at central and provincial level should be carried out to promote understanding among relevant people.
- Strengthen co-ordination and co-operation activities with all related sectors.
- Use all potential local resources available for tobacco control activities (monks, elders, teachers, Lao women's union, youth union, etc.)
- of the reduction of tobacco consumption will rely heavily on information campaigns carried out through the mass media, other community processes and traditional festivals

⁷ CIEH, 2001, National Policy on Tobacco Control in Lao PDR.6P

⁸ CIEH, 2001, National Policy on Tobacco Control in Lao PDR. 13P.

3. Information, Education & Communication Programme (IECP):

IECP was started in 1989, and began conducting health education training at central and provincial level throughout the country, supported by WHO (Biennium? budget). The coverage of the programme has now been reduced to a few provinces: Savannakhet, Luangphrabang, Vientiane Municipality and Champasak, and with implementation here depending on the support of outside agencies. The major constraints for the project are a shortage of funding from the government and a lack of health education facilities such as visual aid materials.

Opportunely, 2 years' funding for IEC as part of Malaria Control under the "Health System Reform Project", funded by a World Bank loan in 1994, provided for the strengthening of CIEH and capacity building for the health staff responsible for IEC at central and provincial levels. The planned community activities were curtailed, however, due to long delays caused by the bureaucratic process of securing MOH approval for the provincial IEC plan of action, and eventually the channelling of funds to other projects such as the construction of Champaks Hospital. IECP was left with a tiny budget, which was used for HPS activities such as TV and radio programmes and a magazine. The meeting to review each national health project decided that co-operation and co-ordination with other sectors were vital for project management and implementation in the future. The subsequent IEC Integrated plan for Malaria Control planned for co-operation between CIEH and Centre of Malaria, Parasitology and Entomology (CMPE) on future IEC activities under the Malaria Control project. CIEH's role was to create visual aid materials and provide training, especially for health education methodology. Sadly this co-operation never materialised as planned, largely owing to a lack of commitment on both sides and further bureaucratic delays. The malfunctioning of the IEC Committee became a grave concern for project implementation in the future, and so the first round table meeting for health education on malaria control was organised by CMPE in September 2000 with the participation of representatives of both governmental and NGO founders. The outcome of the meeting was that a new "IEC Working Group" should be established, with CIEH acting as the coordinator for setting it up⁹.

The proposed IEC Working Group, currently awaiting MOH approval, will have 8 functions¹⁰: 1. / Gather all data, information, financial support and existing IEC from various departments. Encourage the relevant Ministries, Departments and Centres to work effectively with each other and with NGOs. 2./ Seek appropriate messages for dissemination to the target groups of the project. At the same time, better channels for the dissemination of messages to different target groups should be considered. 3/

⁹ CIEH, 2000, Round table meeting report on malaria IEC.

¹⁰ CIEH, 2001, Report on the IEC working group meeting.

identify the contents of IEC and priority areas where IEC material is urgently needed. 4/ Ensure that available resources for development and dissemination of IEC materials on the same subject are pooled. 5/ Conduct regular meetings with the concerned Ministries, Departments and Centres to review the problems affecting IEC implementation. 6/ Catalogue IEC materials. Invite relevant local and foreign IEC specialists or experts working in Lao PDR to attend meetings to review problems if necessary. 7/ Assist or advice provincial teams in developing appropriate IEC work plans in line with their local situation. 8/ Mobilise available resources and try to identify additional donors.

(4) Other cooperation

- EPI zone zero co-operation

One staff member of CIEH is a member of the committee overseeing this project, which began in 1999. The main IEC activity is an open-air quiz show programme, which is part of a participatory community approach. This activity is organised specially in Luangphrabang Province in order to increase zone zero vaccination rates.

- Co-operation with PIDP Project (Paediatric Infection Disease Prevention)

The collaboration between CIEH and PIDP started after the visit of Dr. Kuroiwa and team in 1998, and focused on strengthening health education regarding vaccinations, in preparation for the campaign for Polio Eradication from Lao PDR in 2000 and encouraged people living in zone zero to use vaccination services at hospitals or other fixed centres. CIEH also developed audio-visual resources for the project¹¹.

- Cooperation with NAM SAAT

Active co-operation started in the year 2000 with the purpose of improving knowledge on individual hygiene, clean water and environmental conservation through health radio programmes on both FM and AM.

The programme enjoyed very good audience participation from throughout the country, with the number of letters from the public increasing every month.

12.3.2 Overview of existing health education communication in Lao PDR

Lao people are not static about health issues. They look for ways by which to improve their lives and live more healthily. But there are many beliefs, customs, traditional knowledge, attitudes and practices that prevent many groups from accepting so-called modern health practices. Normally such groups are very vulnerable and susceptible to disease.

¹¹ CIEH, 2001, Report on co-operation between CIEH and PIDP project.

The Ministry of Health has listed the following as its national priority programmes¹²:

- Health Prevention and Promotion
- Curative and Rehabilitation
- Consumer Protection
- Human Resource Development for Health
- Health Operational Research and the Health Registration.
- Health Administration

Prevention of disease and promotion of health are top priorities in the planning, administration and management of all health-related programmes. Effective planning, administration and management, are the key to enabling health communication projects to reach their objectives.

Health education communication is one of the services provided by health care systems. It delivers knowledge that can help people to be healthy, prevent diseases and to know when and where to seek treatment. But the performance of health care systems depends ultimately on the knowledge, skills and motivation of the people responsible for delivering services¹³. For the project to be successful it needs multidisciplinary strategies and approaches that include both health care service and education, if not delivering both, then working in co-operation with the other projects or agencies that provide a complementary input.

Many organisations working on health issues in Lao PDR have used a multi-disciplinary approach to educate, communicate and promote health issues on a large or small scale. All projects have taken advantage of working with existing structures, at central, provincial, district and village level, for their maximum target audience's benefit¹⁴.

Given the diversity of the Lao population, it is clear that there is no one approach that will ensure a successful health education and communication programme. Only a multi-channel approach can reach the overall goal of behaviour change.

(1) Interpersonal communication

Interpersonal communication is the best approach to reach small groups of people to discuss a complex issue. Therefore the selection process for village health volunteer (VHV) is important. Many projects have seen the importance of VHVs in health promotion at village level and have established a VHV system to provide basic health services and knowledge on health issue to villages. One common constraint that many organisations are facing is that they do not have VHVs that match project requirements

¹² MOH, 2000, Health strategy 2020

¹³ WHO, 2000, Country health information profiles, 1999 revision. 102P

¹⁴ WHO, 2000, Review of health education and communication in LAO PDR. 3P.

although the project(?which project?) has basic requirements for selecting VHV. The basic criteria for selecting VHV are that they should¹⁵:

- be a respected person in the community,
- be able to read and write Lao,
- be willing to spend some time doing community work, and
- have good support from village administration, etc.

There are many projects that do not facilitate the village volunteer selection process but let communities organise it themselves. Therefore the project management team should make communities understand the importance and role of village volunteers to ensure the right people will do the VHV job effectively.

The second common constraint related to VHVs is that they do not receive proper training in message dissemination and communication skills, which is considered as important if the VHV is to transfer health messages effectively. These communication skills are:

- good facilitation skills,
- ability to use different materials to educate villagers,
- ability to encourage and facilitate group discussion.

The third constraint regarding successful application of the VHV approach is that in some villages there are no materials to enable village volunteers to disseminate health messages. This is the main concern especially for an organisation covering a big area. VHVs are left to provide health messages without any materials, and in some cases village volunteers do not give health education at all.

Monitoring and supervision of VHV is another constraint for the completely effective use of VHV for many organisations. This activity not only provides what village volunteers need for education and mobilising the community, but also gives moral support and recognition for their work.

(2) Radio

Radio is a medium that can reach a wide audience. Radio programmes are cheaper to make and use simpler equipment than TV. There are many organisations working with central and provincial radio stations to provide information concerning health issues but there are some constraints to the implementation of this medium¹⁶.

¹⁵ WHO, 2000, Review of health education and communication in LAO PDR. 29P

¹⁶ WHO, 2000, Review of health education and communication in LAO PDR. 30P

Firstly, lack of planning, a narrow sighted strategy, no participatory planning or training, poor co-ordination, and a weak relationship with the radio partners, result in radio not being utilised fully as an effective education and communication tool. Normally radio is used only to develop and disseminate health messages. There is not much involvement in other health activities like working with village volunteers, mobile teams, and TV programmes. The involvement of radio stations with other health activities can enhance health services and mobilise community and other partners well.

Secondly, there is often no plan for sustainable radio health-related programmes. Most health is supported by projects. When the project finishes, the programme may not be able to continue production.

(3) Mobile / Outreach team

This is the approach by which a multidisciplinary team reaches a community and provides both health service and knowledge. This approach can encourage people to take responsibility for their own health by taking action for health and taking up new practices. But as the mobile team is a team of individuals there needs to be good co-ordination between team members and each member needs to be clear about their role, otherwise poor conditions and unclear roles will be a constraint to the team working effectively¹⁷.

Enough appropriate materials or equipment are often not available and this is a constraint to them carrying out their roles successfully. One of the main constraints to the teams' being an effective long-term health education communications approach is that the mobile/outreach teams activities have recurring costs that the provincial health or government health sector may not be able to cover and so not be able to continue after the project finishes.

(4) Video/ TV

Although they can be an effective tool for education and communication, accessibility to TV and video by the rural community is limited. This is the constraining factor to them being widely effective on issues that are especially relevant to rural populations. Production of television spots and videos is expensive but to copy is not expensive. Therefore projects should budget adequately for duplication of video cassette tapes to distribute widely to villages. In this way high production costs are offset by the messages reaching a large audience.

¹⁷ WHO, 2000, Review of health education and communication in LAO PDR.31P

(5) Other constraining factors

Apart from constraints experienced in various approaches there were some other common constraints identified¹⁸:

- Commitment of partners

Good health education and communication combines different approaches, which will lead to the involvement of people from different sectors, like health staff, mass organisations, mass media, schoolteachers and the target group itself. Each has their own roles but also need to work together in most activities. One of the main factors that does not enable projects to achieve their objectives fully is the weak commitment and collaboration of all partners. Because they are from different sectors, they may have different agendas and objectives, which can lead to weak collaboration and less commitment to a multidisciplinary approach. For the collaboration and commitment of all partners not to be a constraining factor, but rather an enabling factor, good co-ordination, participatory planning, advocacy and communication are needed.

- Lack of appropriate and sufficient materials

The lack of existing materials, and the need for more appropriate materials, are constraining factors, which affect many approaches. HIV's, mobile teams, teachers, and clinics, need to support their service and education communication activities with materials, and materials need to follow up and reinforce their activities. Materials help to initiate and sustain behaviour change. They encourage people to think and act for themselves after the VHV or mobile team has gone home. Developing and printing materials is very cost-effective compared with the costs of other media, so in theory should be more sustainable and therefore applicable to the Lao situation on an ongoing basis. To increase efficiency of printed materials, project teams should develop a strategy to utilise them at different levels, especially at village level.

- Lack of health education and communication indicators

Health education forms part of most health projects. Most use a multi-channel approach for their health education and communication activities. Although most organisations have health education as one of their components, rather than as a supporting activity, they do not establish specific objectives. Therefore they cannot really measure the outcome to see how health education and communication activities have succeeded in terms of objectives and also they are not clear on what the enabling factors, constraints and successes have been. Lessons cannot be learnt as to how to make education communication more effective without fuller indicators. The lack of complete planning,

¹⁸ WHO, 2000, Review of health education and communication in LAO PDR. 32P

strategising, monitoring and evaluation are constraints to more effective programmes in the future.

¹⁹ Country strategy note, LAO PDR and UN until 2000, Vientiane.21P.

²⁰ SPC, National statistics centre, 1997, Results from the population census 1995.15P