

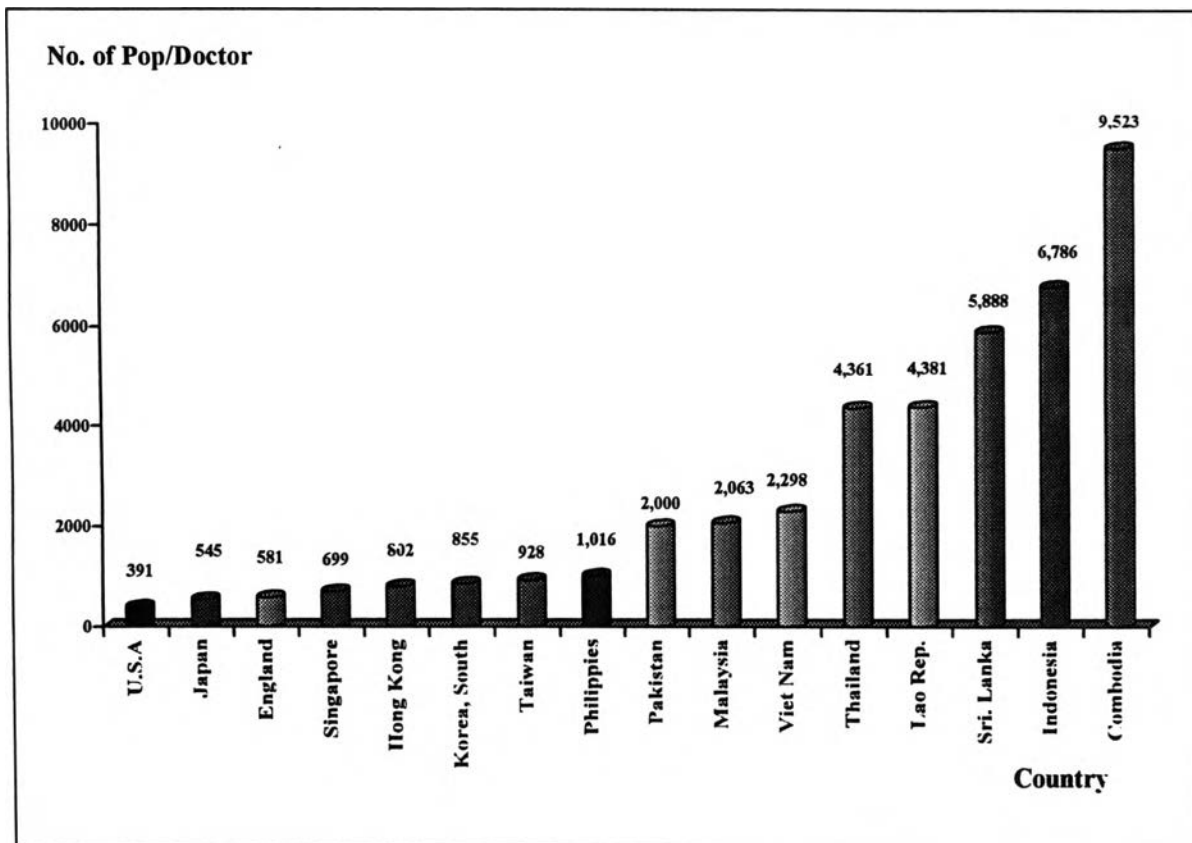
CHAPTER 1

INTRODUCTION

1.1 Background

Shortage of human resources in health service system is a worldwide phenomenon and may show up in different aspects. Many developing and underdeveloped countries in Asia such as Indonesia, Sri Lanka, Cambodia and Thailand are facing the problem of shortage of high level professionals like physician. This problem is far more severe in rural and remote areas of those countries. **Figure 1.** illustrates great discrepancy in the ratio of population to doctor between developed countries such as USA and Japan, and some developing and underdeveloped countries (Asia week, 1996).

Figure 1. Ratio of population to physician among different countries in the world

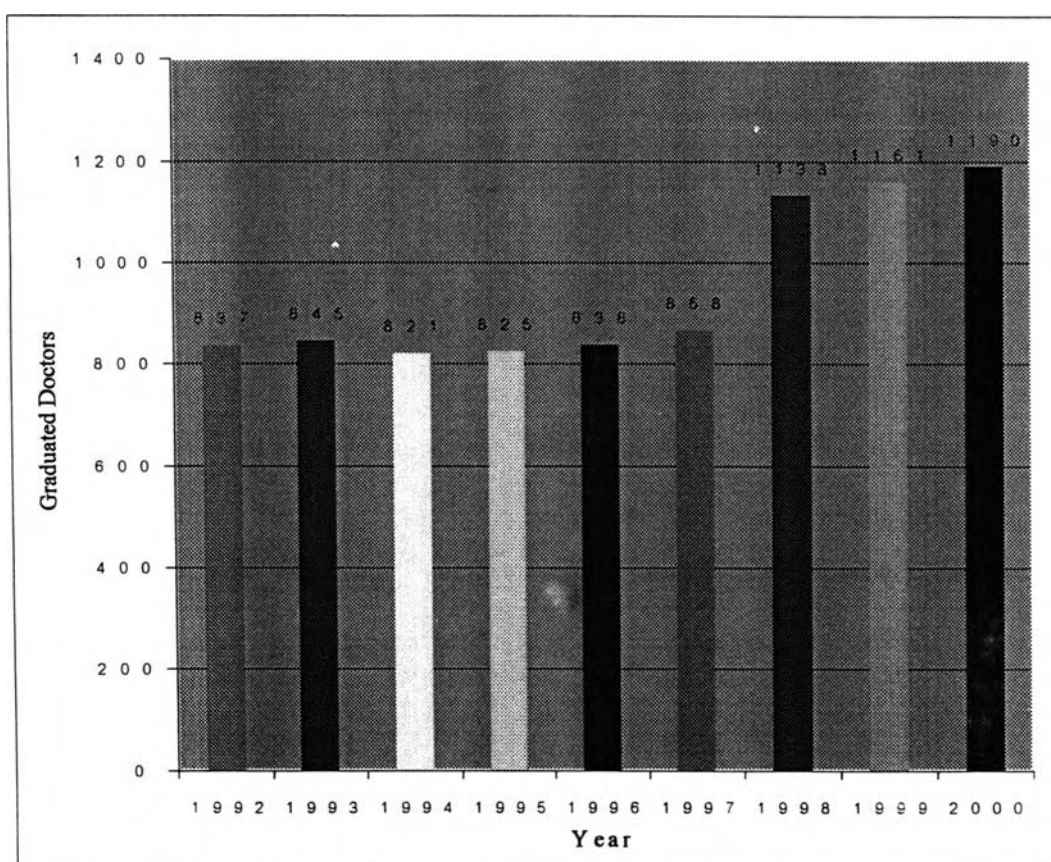


Source: Asia week, February 1996

In Thailand the problem of shortage of doctors still exists and is worsening. In 1996, there were 21,916 medical doctors registered with the Medical Council, but only 17,500 were actually practicing (the remaining had retired or migrated to other countries). According to the figure reported in Asia week, 1996, the proportion of doctor to population in Thailand was 1: 4,361. It is estimated that 27,250 doctors are required. This means that there is a deficit of approximately 10,000 doctors. In 1992-1997 Thailand has produced about 800 doctors annually from 11 medical schools (10 public and 1 private). The number of doctor graduates climbed up to 1133 in 1998 and

1161 in 1999. Thailand's total annual production capacity is 1190 doctors at present time as shown in Figure 2.

Figure 2. Number of new graduated doctors in year 1992-2000 (Source: MoPH)



It is expected that the production capacity will increase to 1,700 doctors per annum in the next 20 years. (Bureau of Health Policy and Plan, Ministry of Public Health. Health in Thailand 1995-1996. Bangkok: Veteran Press, 1997. : 91). However, estimation of the doctor demand by using the rate of doctor production and the rate of population growth (given the population distribution is the same as present time) indicates that there will be shortage of doctors between 3,268-5,683 or 4,476 on average, in the next 10 years, or 4,262-8,563 (6,413 average) in the next 15 years.

In addition to overall doctor shortage within the country, Thailand has the problem of uneven distribution of doctors between rural and urban areas. Most of the doctors are clustered in Bangkok and the Central Region. Current figures from the Ministry of Public Health in 1999 indicates that the ratio of doctors to population in Bangkok was 1:760, while that of the north and northeast regions was 1: 4,869 and 1: 8,116 respectively (Ministry of Public Health, 1999). In remote and risky areas like near the country border, the shortage is found to be especially more serious than in other parts of the country. This resulted from the rapid growth of private health sectors and the drainage of doctors from MOPH to private sectors in city areas. In analyzing the distribution of doctors by agency in the past decade, it is found that since 1989 the proportion of doctors in the public sector is declining while it is rising in private sector. The percentage of doctors in the private sector has risen from 6.7 percent in 1971 to 24.7 percent in 1995, while that in the public sector (MOPH and other ministries) has declined from 81.9 percent to 70.9 percent in the same period (Bureau of Health Policy and Plan, Ministry of Public Health. Health in Thailand 1995-1996. Bangkok: Veteran Press, 1997. : 93)

It has also been found that the number of training physicians to become a specialist has been rising. In 1996, the percentage of medical specialists was as high as 49.97 Percent (10,952 doctors) (Bureau of Health Policy and Plan, Ministry of Public Health. Health in Thailand 1995-1996. Bangkok: Veteran Press, 1997. : 96). These medical specialists have to work in urban area where professionally modern equipment and technology are available. This is worsening the uneven distribution of doctors.

Some hospitals have no doctors, for example, the hospitals in 5 provinces near the southern border.

The shortage of doctors directly affects the quality of health services to rural people and the accessibility of health services. This wide gap between rural and urban areas affects the quality of life for people and human resource development in short and long terms. (SHPROF Team, 1996:67).

1.2 Health Service System in Thailand

1.2.1 Present health service situation

The Ministry of Public Health (MOPH) is the main authority for providing health services in rural areas throughout the country. The health service system in Thailand has evolved from self-reliance in the past, using local wisdom for curative and health care, to the modern medical and health service system. In the new system, various disciplines of health personnel have been produced, and health care technologies produced and developed according to new approaches. This includes the designation of “providers” and “recipients” and the service system, with the public sector as the main service providers. People who work for the government and their families are also provided with social welfare services. The following five groups are people receiving free medical service from the government.

1. Children under 12 years of age.
2. Elderly people
3. Disabled persons

4. Members of religious communities (priests, monks, etc.)
5. Poor people with income less Baht 2000 per month.

The government also provides health insurance cards for people at low cost. (around 500 Baht per 5 persons per year in one family). People who work in non governmental companies have social health security. They have to pay only up to 3% of their income while the exceeding amount is paid by the government. Private sectors also provide health care services partially for profitability.

Components of the health service system include health resources, management, organizational structures, financing, and health services. Health resources are manpower, health facilities, medical supplies and technologies, and the body of knowledge.

Health manpower is one of the essential resources in the health system. It is the health personnel who use health technologies in management and provision of health services for the public health. The expenditure for health personnel is as high as 60 to 80 percent of the overall public expenditure in health. This report will focus in detail on one category of health personnel, which is a doctor.

1.2.2 Effect of Social Expectation on Health Service System

The social expectation of health service system is an element used to determine direction for development of the health service system. The health service system has the obligation to treat every person with equal quality and efficiency. This

should give all patients a better outlook for their quality of life. The service has to be reliable and responsible for every patient. These are the top expectation of patients from health service system.

During an audit of the concept of health service system for the basic needs in the future, the following weak points were found:

One weakness of health service system right now is at the primary care level. Primary care has to be integrated into health service system. The staff working for primary care has to be increased. This ensures that people are treated efficiently in primary care and decreases hospital workload in dealing with a large number of patients. As a result this will help increase effectiveness of the whole health service. The first contact for patients should be the primary care. There the patients should undergo their first examination and diagnosis. This will relieve hospitals from patients who do not really need to be treated there. The future role of general doctors is to support and provide service in primary care. General doctors should work as a team with other health personals. The general practice doctor will provide service under a specialist for primary health care and a family physician.

Therefore the training of under graduation medical doctor should emphasize and focus on preparing for the best service in primary health care instead of curing the common diseases only.

The great service physician in primary health care should have the following qualifications:

- Experience and ability to provide holistic health care service to patient.
- Experience and ability to communicate with patients and patient's family as an efficient consultant.
- Knowledge in multiple fields and ability to apply appropriate treatment.
- Skill and ability to work with health care team.
- Ability to use appropriate medical technology with efficiency.

1.3 Medical Education System in Thailand

1.3.1 Background

There are ten public and one private medical institutes within Thailand. Ten public medical institutes have actually enrollment around 840 medical students a year and plus with urgent enrollment 300 medical students in 10 year from 1993 –2001. The only one private medical department of Rungsit Private University has an enrollment of 48 medical students and the first batch of 32 students graduated in 1995. **Table 1.** Shows the number of medical student enrolled from different medical universities in the year 2001.

The current medical curriculum is composed of 6 years of study:

- First year: Basic sciences
- Second & Third: Pre-clinical
- Fourth & Sixth: Clinical practice.

To become a specialist, post-graduate training and passing an examination operated by the MOPH Medical Council are needed. Approximately 300-400 medical specialists are trained each year.

Table 1 : Number of medical student enrolled in year 2001

Faculty of Medicine	University	No of enrolled	Admin. Ministry	Years of education
1. Siriaj Hospital,	Mahidol	230	U.A.*	6
2. Ramathibodi Hospital,	Mahidol	150	U.A.	6
3. Chulalongkorn University	Chulalongkorn	190	U.A.	6
4. Srinakarin-Taraviroj	Srinakarin-Taraviroj	90	U.A.	6
5. Pramongkutklao College	Pramongkutklao College	65	Defense Univ.	6
6. Thammasart	Thammasart	90	U.A.	5**
7. Chiang Mai	Chiang Mai	46	U.A.	6
8. Khon-Kaen	Khon-Kaen	33	U.A.	6
9. Prince Songkla	Prince Songkla	39	U.A.	6
10. Rungsit	Rungsit (Private)	48	U.A.	6

Source: MoPH, *U.A. : University Affairs, **: Different curriculum. Students with the credits of basic science or BA are accepted..

1.3.2 National Examination for Practice License

To receive a medical practice license only medical students graduating from private universities must pass the national examination organized by the Thai Medical Council. The students graduating from public medical universities become doctors automatically without taking the national examination (SAPROF Team for the overseas Economic Cooperation Fund OECF 1996:29).

1.3.3 Weakness of the Current Medical Education System

As discussed earlier, rural doctors are expected to be more than just doctors, who use only medical knowledge from their study and medicines to cure diseases for rural people. Rural doctors are expected to provide health advice, community support and all primary care services to community members. However, for the current

situation new medical graduates are lacking of positive attitudes towards rural communities. It is likely that graduate doctors would prefer to work and live in urban areas where technology and amenities are available. This leads to the problem of brain drainage, mentioned previously.

The investment in the medical doctor production process is far most important in medical health service. Medical doctors are the key persons for medical health service system. At present the medicine curriculum in Thailand provides a six year program. It emphasizes on organ basic pathology. This takes into consideration only problems in single disease instead of the holistic health problems.

Also, current emphasis is placed on the content of biomedicine more than on the psychosocial aspect involved with the illness. The teaching has to emphasize on solving health problems and sicknesses to achieve a better health for the people. At the moment there are not enough general practitioner to give sufficient primary care. In the future, holistic care should be combined into the medicine curriculum. It should also integrate more on the communication skill in community.

1.4 Collaborative Project to Increase Production of Rural Doctor (CPIRD)

1.4.1 Background

In the year 1975, the Project to Increase Production of Rural Doctor (CPIRD) was established to promote medical education for rural students. Its purpose was to develop a health service system, which is in line with the expectation of Thai social system as discussed in Section 1.2.2.

The rural students who were selected to join the project are expected to provide long-term rural health services in their hometown after their graduation. The follow up study of this ten-year project indicated high level of project success. This study was send 259 questionnaires to 259 physicians who graduated form the year 2518-2525, and they all work in the community hospital of Ministry of Public Health. These founded 142 from 145 of the physicians who answer the questionnaires from this project are able to work in the rural areas, only 3 physicians were move out because of the marriage reason. (The evaluation research of the Project to Increase Production of Rural Doctor, Mahidol University, September 1990. Bangkok: Parbpim Press, 1990. : 57 and The meeting report of the solving problems of lacks Medical Doctor in Rural area, Nation Level Committee, Ministry of Public Health. March 1999. Bangkok: PBRI Press, 1997. : 6)

In 1994 The office of the Collaborative Project to Increase Production of Rural Doctor (OCPIRD) was established and implemented under the administration of Praboromrajchanok Institute. In December 1997, an office was organized to implement

the project directly under the command of the Permanent Secretary, Ministry of Public Health (MoPH) Thailand. This office later on was converted into The office of the Collaborative Project to Increase Production of Rural Doctor (OCPIRD). OCPIRD was established especially to solve the critical problems of shortage and uneven distribution of medical doctors in Thailand.

The concepts and principle of OCPIRD for solving problems evolved from the satisfactory results of the project “promotion of medical education for rural people”. This is a collaborative project between MOPH and the Ministry of University Affairs (MUA). The Faculty of Sciences and Faculty of Medicine under the supervision of MUA are responsible for Pre-Clinical Medical Education year 1 to 3.

The Medical Education Centers (MEC) under MOPH in the regional hospitals serve as Clinical Medical Education Centers for years 4 to 6 training for medical students. Their clinical capability achieves the same standard as the Thai Medical Council. This arrangement enables medical students to familiarize themselves with real situations and with environmental and health problems in rural communities. Furthermore, in the recruitment process, local students in the rural areas will have high priority for acceptance into this particular program. Therefore, production of doctors through the above method can contribute to solving the shortage and uneven distribution and to optimize the resources. It is less expensive than establishing new faculties of medicine. The students from this project are obligated with the MOPH to work in rural district hospitals for 3 years after graduation. To ensure that medical

doctors from this project will work in rural health services and health systems, OCPIRD has to provide intensive training for medical students to achieve these goals.

1.4.2 CPIRD Objectives

The main objective of the project is the production of medical doctors for rural areas. The expectation is to supply the sufficient number of medical doctors in rural areas. Medical doctors from this project should have a good attitude in health service for rural people. General objectives are summarized as follows:

- Increase the medical doctor production and increase number of doctors working in rural areas,
- Increase number of doctors working for MOPH (3,000 graduates in 16 years from year 1995 to year 2010).
- Provide more educational opportunity to rural people on medicine.
- Strengthen the capability of regional hospitals and their network under this project on medical education and health system development.
- Develop the model of the collaboration between Ministry of University Affair and Ministry of Public Health in teaching, academic, health service provision, research and management.
- Develop cooperation between the twelve Medical Education Centers and the seven Faculties of Medicine.

The requirements for medical graduates from this project are knowledges and skills needed to serve the rural areas. Their clinical capabilities have to meet the

standards of the Thai Medical Council. They need to have more knowledge about community basics and are community oriented emphasised on holistic care approach. They need to have a good attitude for working in community hospitals, and they are well prepared to serve the community in health promotion and health prevention and have a concept of holistic care, not just curative care. The MOPH is expected to provide medical doctors who have potential to sustain work in community hospitals.

1.4.3 Curriculum Design

Table 2. Basic plan of CPIRD medical curriculum.

Medical Students						
<i>Educational year</i>						
1	2	3	4	5	6	Post-graduation
Basic	Medical	Science	Clinics and Community medicine			
Study at the faculties in the affiliated universities			Study at the medical education centers in regional hospitals and their network under MoPH			Both sides collaborate in the establishment of the continuing education for the whole life, emphasis on general practice/family medicine

The administration of this project requires students from rural areas to study 6 years in the affiliated Medical School. The selection process involves intensive interview to measure attitude towards rural community and standard aptitude tests. Three years of rural services are compulsory after their graduation and this contract with the government is signed before being accepted into the project. General medical curriculum design for this project is shown in Table 2.

To set up the teaching and learning according to this design, faculties of medicine and regional hospitals are provided with network in order to modify their conditions and environment to correspond with this design. Currently there are a total of 896 CPIRD medical students from seven affiliated universities, accounting for 96 % of the target number as shown in Table 3.

Table 3. Number of PIRD students enrolled during 1995 – 2001

University	Planned number 1995-2000	Enrolled student							Total 1995-2001
		1995	1996	1997	1998	1999	2000	2001	
1. Thammasart U	150	0	28	30	19	30	30	27	164
2. Chulalongkorn U	80	0	0	14	7	17	12	16	66
3. Mahidol U	192	0	0	16	24	78	83	78	279
4. Khon-Kaen U	77	11	13	13	16	14	15	16	98
5. Chiang Mai U	92	0	0	16	16	30	29	30	121
6. Narasuan U	300	0	0	61	61	90	84	89	385
7. Prince Songkla U	40	0	0	0	0	20	20	20	60
Total	931	11	41	150	143	279	273	276	1,173

Source: OCPIRD, MoPH

1.5 How to Achieve Goals of CPIRD

To successfully achieve the CPIRD goals mentioned previously, the supportive project was established to develop the community study model for first year medical students in the form of self-study manual. A pilot batch of first year medical students was placed to experience rural community life for two weeks with using the self-study manual as their guideline. These students were expected to create their learning experience in real world community by themselves including learning of rural life style, the way of basic community thinking, tradition and culture as well as to find out how to solve health problems within the community.

The main project idea is in accordance with Professor Doctor Praves Wasri's, which states that **“the basic of the family medicine starts from the community”**. Medical students should not be educated only on the medical and clinical knowledge or practising at a hospital during their first year of study as this would result in lacking of knowledge about dimension of human being. However, first year medical students should be given opportunity to have early community exposure. Living with people in the rural community enables them to learn from people's opinions and learn to bring natural happiness into the mind of humanbeings. The details of this project, which include project description, evaluation of the project implementation and discussion of the results are discussed in depth in the following chapters.