CHAPTER 1
INTRODUCTION

1.1 Background and rationale

Collection and analysis of cost data can provide considerable useful information on health services of all kinds (Creese, A., and Parker, D. 1994). Cost analysis not only indicates the amount of funds (that are required to continue the services) but also helps Health Facilities to assess the use of personnel in delivering health services and the efficiency of putting supplies, transport resources and other inputs to work.

Before Thai government implemented Universal Coverage (UC), the health financing in Thailand can be seen in the table below:

Table1.1: Characteristics of Health Financing in Thailand (before UC implemented)

Insurance Program	Provider payment Mechanism	Source of Fund
CSMBS	Fee for service	General Tax
SSS/WCS	Capitation	1.5% Employer/Employee/Government
VHCS	Capitation	MOPH Fund
LICS	Global budget	MOPH Fund
Private	Fee for service	Premium
Uninsured	Fee for service	Out of Pocket

Source: Donaldson, Pannarunothai, Tangcharoensathien 1999

Thailand's Universal Coverage has been implemented to the whole country since October 1st, 2001. The provider payment mechanisms of the Low Income Scheme (LICS) and the Uninsured have to change from global budget and fee for service respectively to capitation.

Table 1.2: Characteristics of Health Financing in Thailand (at present)

Insurance Program	Provider payment Mechanism	Source of Fund
CSMBS	Fee for service	General Tax (managed by MOF)
SSS/WCS	Capitation	1.5% Employer/Employee/Government
UCS	Capitation	MOPH Fund (arranged from Government)
Private	Fee for service	Premium

The capitation payment mechanism should induce providers to concentrate more on cost containment instead of indulging in risk selection (Van, R., C., J., A., and Van, W., P., M., M. 1993). However, these create advantages and disadvantages for the society, which can be summarized as loss/bankruptcy of services, quality of services and the role of locality in administrative decision-making (The Asia-Pacific Health Economics Network [APHEN] 2001).

For the loss and bankruptcy of services, this problem may occur due to inadequate hospital management of the budget and adverse patient distribution (for example, some hospitals have a high percentage of chronic patients which are costly) [APHEN 2001]. In the next five years, some hospitals would face the bankruptcy problem and will have to shut down. It is therefore, important for all levels of health facilities to understand their financial situation.

Why does this study focus on the community hospitals in the Northeast?

Community hospital is located in a district or sub-district with 10 to 120 inpatient beds, covering a population of 10,000 or more. Medical and health personnel there give more emphasis on curative care, compared to those at primary care facilities.

In 1996 there were 15 regional hospitals, 77 general hospitals and 707 community hospitals at district level. These figures indicate that the majority of hospitals in Thailand are the community hospitals. In Bangkok there is one bed

for every 23 persons and the doctor-to-population ratio is 1 to 700-800, comparing to the Northeast where there is one bed for every 1000 persons and the doctor-to-population ratio is 1 to 10,885. And in 1991, 18.7%of populations lived in urban areas (Health System Research Institute 1995).

According to a study by Patcharanarumol and Tangchareonsathean (2000), it was found that the Northeast region had the highest bed occupancy rate and turnover rate (95 percent and 100 admissions per bed). It means that the hospitals in the Northeast region provided more inpatient services than other regions. This indicates the high demand in this region.

Consequently, if the community hospitals cannot survive financially, this will cause more problems of equity in health care access especially for rural population in the Northeast

1.2 General Information

1.2.1 Health services in Thailand

Health services in Thailand are classified into five levels according to the level of care as follows (Thailand Health Profile 1998):

1.Self-Care Level: Services at this level include the enhancement of people's capacity to provide self-care and make decisions about health including primitives, preventives, curatives and rehabilitative care. This is an effort to supplement the primary health care services.

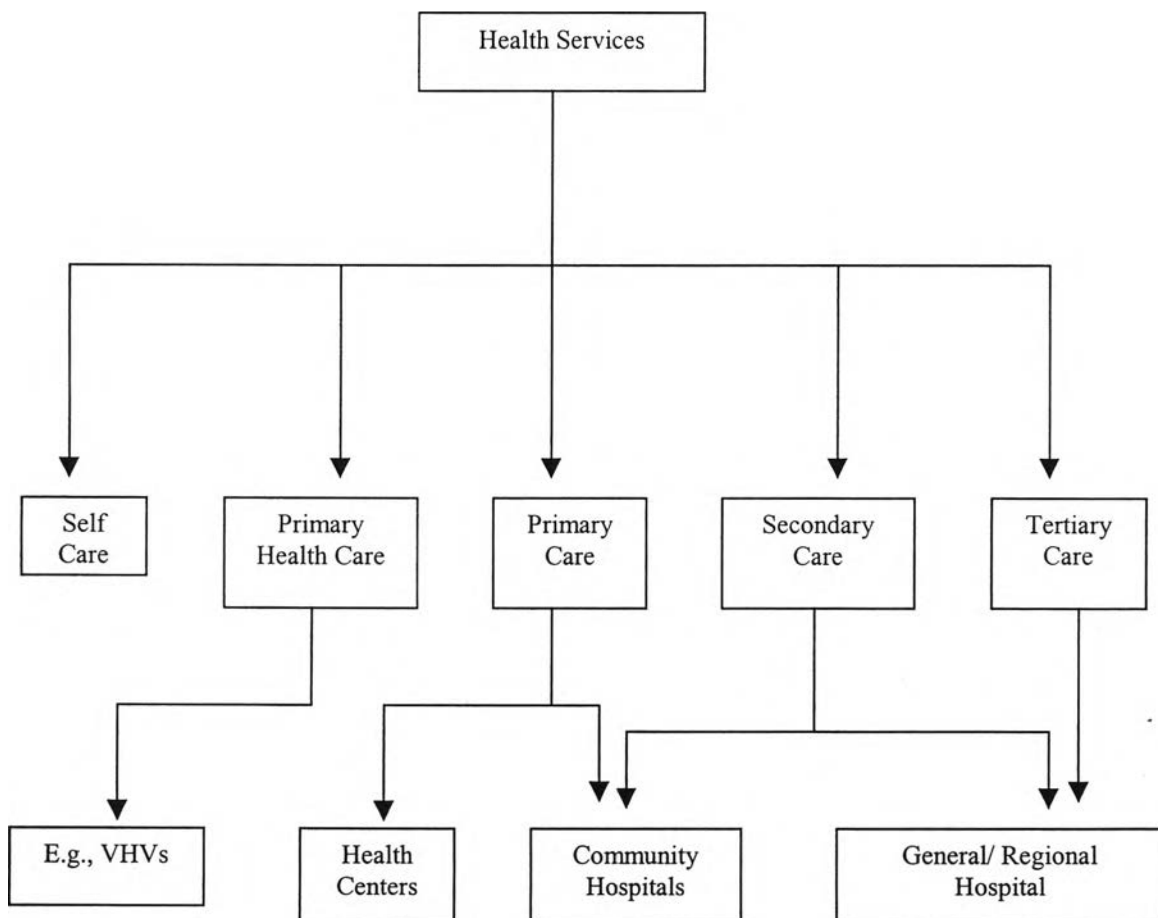
2.Primary Health Care Level: The primary health care services include those organized by the communities provide services related to health promotion, disease prevention, curative care and rehabilitative care, using medical and health technology that are appropriate to communities' needs and culture. Service providers at this level are voluntary health volunteers (VHVs) or other private sector volunteers who will normally have a linkage with other government health service programs.

3.Primary Care Level: This level of care includes medical and health services provided by medical and health personnel at various health units such as Community Health Posts and Health Centers

4.Secondary Care Level: Medical and health personnel with various degrees of specialization provide Health care at this level such as Community Hospitals, and General or Regional Hospitals.

5.Tertiary Care: Mostly medical specialists and health personnel provide Health services at this level.

Figure 1.1: Level of Health Services in Thailand



Tertiary care facilities include (1) general hospitals, (2) regional hospitals, (3) university hospitals, and (4) large private hospitals (generally with over 100 beds and medical specialists).

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In addition to five levels of services mentioned above, there are other health service outlets such as private pharmacies and non-MOPH public hospitals, such as those under the Bangkok Metropolitan Administration.

1.2.2 Buri Ram Province

Buri Ram province is located in the Northeast of Thailand. It is approximately 400 kilometers from Bangkok. Buri Ram has a population approximately 1,520,619. The majority of people in Buri Ram are farmers. The Gross Provincial Products (GPP) per capita of Buri Ram province is the ninth lowest of GPP per capita of Thailand in 1998 (Office of National Economic and Social Development Board 1999).

Table 1.3: Per Capita GPP of 10 Lowest Provinces (million baht)

1998	
1. Nong Bua Lam Phu	17,670.00
2. Am Nat Charoen	18,466.00
3. Si Sa Ket	20,079.00
4. Surin	20,107.00
5. Yasothorn	20,110.00
6. Sakon Nakhon	20,624.00
7. Nakhon Phanom	20,643.00
8. Maha Sarakham	22,166.00
9. Buri Ram	22,520.00
10. Ubon Ratchathani	22,669.00

Source: Office of National Economic and Social Development Board 1999

Buri Ram has health facilities in all levels (primary level, secondary level and tertiary level). These include, one provincial hospital, twenty community hospitals and two hundreds twenty-six health centers.

1.2.3 Government Spending for Universal Coverage Scheme

After Universal Coverage has been implemented since October 1st, 2001. The payment mechanism for government hospitals was changed from global budget to capitation payment by using universal coverage rate (1,202.40 Baht / person and after some deduction by MOPH, the hospitals will receive approximately 1,052 Baht / person), which already includes labor costs.

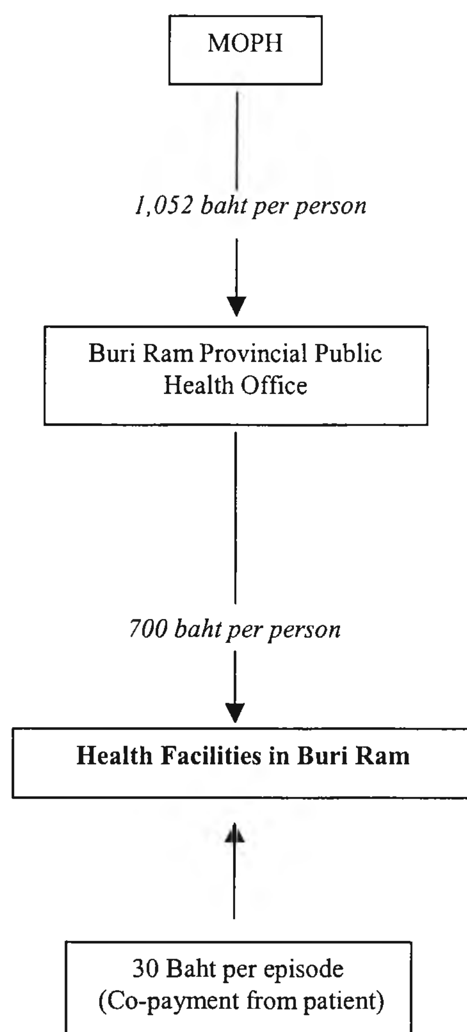
The contracting units for health care delivery under UC scheme are divided into three levels (Development of Health Services Network Office, 2001) as follows:

1. Contracting Unit for Primary care (CUP): The health facilities provide curative care, health promotion, disease prevention (similar to outpatient services), and also home visits.
2. Contracting Unit for Secondary care (CUS): The health facilities give more emphasis on curative care for inpatient services. These include community hospitals and provincial hospitals.
3. Contracting Unit for Tertiary care (CUT): The health facilities give more emphasis on specialized services, high technology and high cost care. These include general hospitals and university hospitals.

In addition, MOPH has two main alternatives of payment mechanism (The Working Group on Implementation of Universal Health Coverage under the State Policy 2001). The first alternative is inclusive capitation payment where MOPH pays approximately 1,052 baht per person direct to each hospital. The second alternative is capitation for ambulatory care payment where MOPH pays direct to each Provincial Public Health Office, who will subsequently allocates resource to each hospital according to the criteria of that province. Buri Ram province uses the second option for reimbursement because health facilities will have more time to prepare their administration and management system.

After Buri Ram Provincial Public Health Office gets the lump sum, which is calculated by multiplying the universal coverage rate (UCR) by the number of people registered with UC of whole province. Next, Buri Ram Provincial Public Health Office will deduct some money for total salary of health personnel (civil servants) in Buri Ram. Then, it will deduct ten percent for administration and 14 Baht for Extended Program of Immunization (EPI), and divide the remainder by the population of the whole province. As a result, Buri Ram Provincial Public Health Office will get per person rate (approximately 700 Baht / person), which will be used for reimbursement for each hospital. Every hospital will receive from Buri Ram Provincial Public Health Office the lump sum, which is equal to per person rate (700 Baht) multiplied by the number people registered with UC in catchments area.

Figure 1.2: Financing system of UC Scheme in Buri Ram province



(See more details on general financing system in Thailand before UC scheme implementation in Appendix I, Table I.1, and reimbursement and payment mechanism for public health facilities in Appendix I, Figure I.1 and Figure I.2)

1.3 Hypothesis

This study has two hypotheses. Firstly, the costs of community hospitals cannot be covered under the Universal Coverage Scheme. According to the report from APHEN (2000), the loss and bankruptcy of services can occur due

to inadequate hospital management of the budget. In addition, the technical report of Donaldson, Pannarunothai and Tangcharoensathean (1999) suggests the Swedish-Singapore-Thailand (SST) model for future financing. Under the SST model there would be 3 major groups, CSMBS, SSS and all of the remaining (which is under UC at present).

Table 1.4: Suggested Charge Schedule for Accredited Service Providers under SST

Type of Services	Average cost	Co-payment
Ambulatory visit at register PHC	150 Baht	50 Baht
Ambulatory visit at Accredited Hospitals	300 Baht	150 Baht
Admission in ward A (luxury) per day*	800 Baht*	1000 Baht*
Admission in ward B (semi-private)/day	1200 Baht	900 Baht
Admission in ward C (common)	800 Baht	200 Baht

Note: * only routine service costs and payment shown here. Ward A patients must pay all additional charges for room, board, and clinical services at full cost.

Not only the average costs of Admission in ward C (common) and Ambulatory visits are higher than the UC reimbursement rate but also service charge suggested in this study is 30 Baht higher than the co-payment rate from UC scheme.

Another hypothesis is that the reimbursement rate of hospitals of various sizes should differ. The larger hospitals, which provide more complex services, should get higher reimbursement rate. A recent study that incorporated both case-mix and service scope variables to investigate economies of scale found no scale economies at the hospital level (Sorkin, L., A. 1992). In Thailand, the sizes of hospitals correlate with the complexity of services (Thailand Health Profile 1998). The larger hospitals will have more patients that are seriously ill. Thus, unless differences in patient health status are considered, the observed relationship between costs and sizes is that larger hospitals have higher per unit costs.

1.4 Research Questions

1. Will the community hospital costs be covered under UC?
2. Should the sizes of hospitals be in consideration for UC reimbursements rate?
3. What is the appropriate reimbursement for two community hospitals?
4. What is the appropriate number of people that should be registered with UC at 1,052 baht per person rate in different sizes of CH?

1.5 Objectives

This study aims to answer the above questions.

1. To analyze the unit cost of CH of different sizes in the first quarter of fiscal year 2002.
2. To identify cost recovery of health care services under UC in CH of different sizes.
3. To calculate the appropriate reimbursement rate for CH of different sizes.

4.To calculate the appropriate number of people that should be registered with UC at 1,052 Baht per person rate of CH of different sizes

1.6 Scope of study

To study costs in the first quarter of fiscal year 2002 (October 1st, 2001 until December 31st, 2001) and revenue from UC in the first quarter of fiscal year 2002 of two community hospitals in Buri Ram which are:

1. Kra-sung Community Hospital: thirty-bed community hospital
2. Lam-prai-mach Community Hospital: ninety-bed community hospital

1.7 Expected Benefit

This study will demonstrate the financial situation under Universal Coverage Scheme at two levels of community hospitals. Therefore, it can be useful for the hospital directors in terms of financial management. In addition, health administrators and policy makers can use the result of this study for budget planning purposes. Moreover, this study can be useful for determine the appropriate reimbursement rate of Universal Coverage Scheme for Thailand in the future.