CHAPTER 2

REVIEW OF LITERATURE

2.1 An Integrated Core Package

"Essential package", "essential health service packages", "core package of activities" or "core services" can be defined as health care services that are considered important and that society decides should be provided to everyone. Values such as, equity, cost effectiveness, transparency, and solidarity explicitly or implicitly underlie these concepts. The concept of essential package is not new, despite the focus on new tools such as the disability adjusted life year (DALY) and the measurement of the burden of disease. These measures have increased interest in defining priorities in health care in terms of cost and efficiency (Tarimo, 1997).

World Development Report (1993) mentions that an essential public health package is likely to include: 1) the expanded program on immunization including micro-nutrient supplementation, 2) school health programs to treat worm infections and micro-nutrient deficiencies and to provide health education, 3) programs to increase public knowledge about family planning and nutrition, self-cure or indications for seeking care, and vector control and disease surveillance activities, 4) programs to reduce consumption of tobacco, alcohol, and other drugs, 5) AIDS prevention programs with a strong Sexual Transmitted Disease (STD) component. This public health package would yield large benefit fits at low cost.

Hence, the integrated core package of HIV/AIDS activities is a subset of essential health package. It is a set of essential HIV/AIDS health services that are appropriately provided for HIV/AIDS patients and their community.

On the whole, both developed and developing countries have tried to delineate and set up service packages meeting the needs of people. In practice, the development of package has not been the panacea that some imagined. The package approach has been a timely reminder of the relative lack of standard and quality assurance in many health facilities. A change of emphasis with the package representing the concept of quality standards of care rather than just a list of defined

interventions should be the way forward. The purpose should be to build capacity for continuous quality improvement, enabling people at all levels of the health sectors to make suitable choices.

The merit of the package approach is the explicit process of priority setting. Hence, the approach encourages public debate about prioritization and the rationing of health services. Such packages are based on an assessment of the cost effectiveness of various interventions. They should improve efficiency in the allocation of resources. The establishment of a package also theoretically limits the variation in availability of services in other parts of the country. Other benefits of packages are that providers of services including insurers cannot define packages of services in such a way as to exclude those at high risk. The allocation of resources is not based on political criteria with priority going to publicly visible activities. This should enhance transparency and accountability in decision making. The tool is also an innovation approach for marketing priorities. However, these advantages have yet to be realized in many countries. The concept of core health services or function has a long history.

Indaratna et al (1998) studied the development of an essential health service package because there are about 40% of population are without insurance scheme and 70% of population pay out of pocket. The essential health package is the necessary and appropriate health services that can provide to people equitably, efficaciously, effectively, and efficiently. This study developed an essential health service package which emphasis primary health care and may also include secondary and tertiary care. This essential health service package includes mother and child health, nutritional promotion, emergency care, communicable diseases care, ears eyes dental care (EED), annual check up, and care for chronic diseases such as cancer, hypertension, diabetes, ortheoartritis, back pain, peptic ulcer, asthma, etc. The authors of the study developed this package by in-depth interview; expert opinion; self-administered questionnaire; and focus group discussion of consumers, community representatives, community leaders, purchasers, and National Economics and Social Development Board (NESDB). This study does not emphasize only an essential package of HIV/AIDS activities. It is a development of general essential health package for every level of health facility.

Suksiriserikul (1998) studied the determination of basic essential health care package. This study mentions basic essential health package includes 5 principles such as: 1) equity, 2) sufficiency of health care services, 3) basic needs of life, 4) standard of basic health services, and 5) social security. According to the study, the basic essential health care package in Thailand is defined to 4 categories: low income card, health card, social security and civil servant.

Punnarunothai and Wongkanaratanakul (1997) published "Estimating expenditures on the basic medical benefit package: expansion of existing welfare to the large population". Three definitions of the basic medical package are as following.

1) The basic medical package covers the same medical services that are already provided to the low income patients, from common treatments in the hospital to cancer care or heart surgeries.

2) This plan is to covers 70% of the total population (excluding those insured under the social security act and the civil servant medical benefit scheme).

3) The covered population must share the cost of medical services at a minimal rate, i.e. 5 –20% of medical charges according to the type of coverage: the low income cared and the general population.

The study found that the costs of extending existing services to low income as a basic medical package to 70% of the population would cost the government a sum of 70,347–140,227 million Baht in 2001. The government's ability to pay is especially strained when the country is faces an economic problem. Using the basic medical package with a cost containment package will be one way to achieve equity in health care financing; consequently, an integrated core package of HIV/AIDS activities is tried to develop due to achieve equity in health care financing.

Leesmith and Punnarunothai (1998) studied the welfare of medical assistance for indigent people. A basic medical package in this study means the appropriate forms and strategies of health services to achieve the universal coverage or equity. Equity is defined as 1) equality of expenditure/capital, 2) equality of inputs/capita, 3) equality of inputs for equal need, 4) equality of access for equal need, 5) equality of utilization for equal need, 6) equality of marginal met need, and 7) equality of health. The medical assistance scheme should be integrated into the universal coverage health services in

order to increase the equity in health care accessibility, to be relevant to the concept of human rights and to reduce the problem of financial barrier. However, to implement the universal coverage health care, the amount of health care expenditure and the package of necessary medical care need to be taken into account. In health care financing area, it is necessary to study and research further to find out the appropriate financing health care system which can create incentive and satisfaction for both health care providers and clients. The development of an integrated core package of HIV/AIDS activities and the cost on provider side is studied due to providers and clients need.

2.2 Cost Estimation from Provider Side

Creese and Parker (1994) in their study defined cost as the value of resources used to produce something including a specific health service or set of services as in a health program. Resources used for primary health care (PHC) program can be described in many different ways. The classification of costs by inputs distinguishes two categories of resource: capital costs and recurrent costs. Capital cost is the cost of the acquisition of goods and services that usually last for more than one year, such as building, vehicle, equipment and long-term training. While recurrent costs do not last for more than one year, such as material supply, maintenance, short-term training, operational cost and health personnel salary and their welfare. Hence, costs of provider can estimate by calculate capital cost and recurrent cost.

Kongsin et al (1992) studied hospital care cost analysis of patients with AIDS/ ARC in the hospitals. The objective of this study is to inform decision making in Thailand about the cost implications of AIDS treatment. The research was done to analyze cost components to government including:

1) routine service cost (RSC) or labor and operating cost by using the retrospective data base from the Division of Provincial Hospital during 1988-1991,

2) medical care cost (MCC) or cost for laboratory test, procedures and medication by using the retrospective data from the available medical records of patients with AIDS/ARC during 1988-1992,

3) external cost (EC) or all expense of patients' s family to support the admission. The results of the study indicate that the RSC (cost/inpatient day) was US$ 13.65 per

inpatient day. MCC (cost/case) was US$ 169.46 per admission, and the EC (cost/case) was US$ 46.16 per admission. The aggregation of RSC and average MCC represent "Hospital care cost" of ARC and AIDS patients in Thailand. Further application of this information with epidemiological data will predict financial impact of the medical care.

Viravaidya et al (1993) studied the economic impact of AIDS on Thailand. The purpose of the study was to estimate the direct cost and indirect costs of AIDS in Thailand. Direct costs included health care and system cost whereas indirect costs mainly included loss in output to the economy. In year 2000, the health care costs for people with AIDS are estimated to be between US$ 658 and 1,016 per year; i.e. 30 to 5o percent of annual household income for the average Thai family or more than 25 times the current annual government per capita health expenditure. And the indirect costs are estimated to average US$ 22,000 per death due to absence of effective prevention and behavior change. The study also discussed the broader impact of AIDS on the Thai economy, particularly on tourism, foreign investment and labor remittance from abroad. According to the authors, between 1991 to 2000 the 1993 value of the aggregate direct costs of the projected AIDS cases and AIDS death would total between US$ 7.3 billion and US$ 8.5 billion.

Yang (1993) studied the economic impact of AIDS in the Republic of Korea. The study computed lifetime economic costs for representative AIDS patients. The research estimated the outpatient costs as US$ 2,215 for an average HIV cost of AIDS patients was estimated to US$ 2,010 (given the 41st hospital day). This study also found that the largest component of the cost of the AIDS epidemic is due to work time lost and future earnings foregone rather than to direct medical care expenditure.

Muangsrimuengdee (1994) studied cost effectiveness analysis of treatment of AIDS related complex with Zidovudine (AZT). The purpose of this thesis was to compare the cost effectiveness of treating AIDS patients with or without Zidovudine. Results of this study showed that the annual cost per case of Zidovudine treatment group was US$ 4,470. The cost incurred by the provider including medical costs and non medical costs was US$ 50, and the average cost incurred by each consumer including direct cost and indirect cost of patients was around US$ 4,420. The annual cost per case for patients in the control group without Zidovudine treatment was US$

2,090. The cost incurred by the provider was US$ 64, and the average cost incurred by each consumer was US$ 2,020. In terms of percentage effectiveness, Zidovudine therapy help to delay the onset of AIDS in the ARC group. The life years gained when each patient received the drug for one year was 0.24 year and 2.13 man-years when in receipt of continuous treatment.

Tin Min (1996) studied the economic burden of HIV/AIDS in Myanmar from the provider perspective. This study emphasizes how to estimate the provider direct cost for treatment and prevention of HIV/AIDS in Myanmar by using a costing model which calculates the cost of HIV/AIDS patients for the next five years. In order to calculate cost of treatment and investigation, the data were collected from forty AIDS patients admitted to the Infectious Disease Hospital, Yangon, Myanmar from April 1, 1994 to March 31, 1995. The calculation of the cost of prevention was based on the information obtained from health personnel of the Central Health Education Bureau, Department of Health, Myanmar. In this study, the economic burden of HIV/AIDS according to different scenarios is calculated and costs for each cost item and each activity in each scenario in each year are calculated and compared. The methodology can be applied in every health center and hospital in Myanmar as its budget includes 1) capital cost: building, equipment, and vehicles and 2) recurrent cost: personnel, supplies, vehicle in terms of maintenance and the maintenance of building. Hence, the total provider costs for the next five years are expected to be 644.2 and 560 million kyats for HIV/AIDS with or without screening respectively. Meanwhile, actual spending continues to reflect the resources available.

Masaki (1997) analyzed the cost of hospice care for HIV/AIDS patients in Thailand. The aims were to identify types of care provided for HIV/AIDS patients in a hospice care and the cost of hospice care at Wat Prabat Numpu in Lopburi province. This study only focused on the provider's perspective of cost and the direct cost of care for HIV/AIDS patients. The cost analysis includes 1) capital cost: building, vehicle and equipment, and 2) recurrent cost: personnel, material supply, maintenance and operating costs. Cost data was collected retrospectively from financial records during the period of 1996 and analyzed qualitatively. It was found total cost of care for HIV/AIDS patients at the hospice in 1996 was US$ 474,382.96, with 678 inpatients and

1,392 outpatients visit. The unit cost per inpatient care was US$ 676.96, the unit cost per outpatient was US$ 11.06, and the unit cost per day was US$ 82.55 for inpatient.

Lertchayantee (1998) studied cost analysis on treatment of PWA in the inpatient department (IPD), Phayao Hospital. The purposes were to study the size and cost of components of treatment of PWA in IPD of Phayao Hospital in 1996-1997. The research was done to analyze the cost components including 1) provider cost which contains medical cost and non-medical cost, 2) consumer cost which contains direct cost and indirect cost of HIV/AIDS patients. Result of this study revealed the size and cost of components treatment of PWA as mention: medicines 69.3%, other services 12.85%, food / room 11.97%, lab test 3.91%, X-ray 1.46%, surgery 0.78% of total cost of PWA. The payers of PWA were characterized into 3 types: 1) the hospital responsible for all expenditure of PWA 57.06%, 2) PWA' s out of pocket expenditure 10.83% and 3) hospital and PWA shared 32.11% of the total expenditure.

MOPH, Thailand (1992) analyzed the hospital care cost of HIV/AIDS patients including three categories: 1) routine service cost is cost per inpatient day, 2) medical care cost, and 3) external cost by using retrospective data from the division of provincial hospitals during 1988-1991. The study found that routine service cost was 341.19 Baht per inpatient day (US$ 13.65), the medical care cost was 4,236.47 Baht (US$ 169.49) per case and external cost was 1,153.91 Baht (US$ 46.16) per case.

Napapunsakul (1992) studied cost and effectiveness of using multi-drug therapy regimen (MDT) in leprosy patients. The study identified cost to be two groups as mentioned: 1) external cost 2) internal cost included direct cost such as medicine, medical supply, health personnel salary and welfare, and indirect cost such as electricity, water and office material. Using comparison of two groups of treatment is the way of effectiveness. From the study, it was found that the labor cost and medical cost were the important components in the total cost.

Vacharak (1996) studied cost analysis of health card services for health card price determination. The purpose of this study is to analyze the cost structure and components of an out-patients visit and an inpatients-day at different levels of public health care facilities in order to determine an appropriate price for health card scheme. Cost structures are classified into capital cost and recurrent cost. Capital costs include

building, construction and supplies. Recurrent costs or operating costs include drugs, medical equipment, utilities and salaries. Variables had been used to determine health card pricing include rate of illness, pattern of utilization, unit costs at different levels of facilities and person per household. Results from primary and secondary data analysis showed that operating costs comprised 70% to 80% of total cost, while capital cost was 20% to 30% of total cost. Salary cost was a major component at every level of health facilities.

Jirachaisopit (1994) studied cost benefit of dental service in health center. This research showed the cost of provider was 92.73% and cost of consumer was 7.27% of total cost. This study estimated the costs to provider by analyzing cost components including 1) medical cost divides to medicine and medical supply, 2) non-medical cost divides to material office and sanitary. The study concluded that it was feasible to launch a dental health service in a health center in the long term only.

Suknuntapong, Suntayakorn and Sringam (1996) studied the unit cost among Khampheangphet Health Center Service 1995. The aims of this study were to analyze the unit cost of health center for these activities: curative care, school health, mother and child health, family planning, expanded progamme on immunization, and to compare the unit cost of each activity between small health center and the big health center. The research was done to analyze cost component to health center including: 1) capital cost that divided to building cost, equipment cost, and vehicle cost, and 2) recurrent cost that divided to labor cost and material cost. The research concluded that ratio of labor cost to material cost to capital cost is 49:31:20. The capital cost and material cost of the big health center is higher than small health center. Material cost is varied by number of patients, but capital cost and labor cost did not. If the number of patients increases the unit cost of labor cost and capital cost will decrease.