

CHAPTER 5



CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study analyzed total and incremental cost for HIV/AIDS patients at a district hospital in 1992 and 1998. The objective of this study is to assess the cost burden to a public hospital at district level after AIDS has spread into the community. The research was done to analyze the direct provider cost of the health service activities related directly to HIV/AIDS patients. The study classified cost by the health service activities i.e. treatment, maternal and child, health promotion, day care, home health care, and other services. Cost was analyzed by input as following; 1) capital cost including buildings, equipment, vehicles; 2) recurrent cost was classified as labor cost, material cost, operating cost, and maintenance cost. This study used data from Chun Hospital. The sample size of both HIV/AIDS and non-HIV/AIDS patients was 92 cases for each group during a period of time for two weeks (22 February to 5 March, 1999).

The primary data was collected from surveying, observation, and interviews with health personnel about their caregivers, the proportion of material usage for HIV/AIDS, and time allocation. The secondary data included capital cost, health personnel income, and some material usage, obtained from hospital database. Budget and financial data of the hospital were collected from asking health personnel and the MIS record of Chun Hospital. The capital cost was obtained from records and useful capital life which was 25 years for buildings, 10 years for vehicles, and 5 years for equipment. This study used the World bank discount rate of 10% to calculate capital cost. Labor cost for HIV/AIDS patients was obtained from time logging observation and interviewing with health personnel. Material usage came from records and observation. The proportion of medicine, medical supplies, X-ray cost, and laboratory cost for HIV/AIDS and non-HIV/AIDS patients at OPD and IPD were the rough proportion obtained from 2 weeks observation. These figures were used to calculate unit cost per day for medicine and medical supplies. The unit cost per patient for X-ray and

laboratory cost were also estimated for one year. Operating cost was collected from MIS records and related to HIV/AIDS patients by the same method as building cost. Maintenance cost for HIV/AIDS patients are a rough proportion of vehicle cost.

This study assessed cost component related to HIV/AIDS patients by activities i.e. cost of OPD, IPD, MCH, health promotion, day care, HHC, and other service activities. Total cost of OPD was 28.2%, which was the highest cost followed by 22.5% for auxiliary services, 21.4% for IPD, 14.4% for MCH, 7.4% for other service, 3.8% for day care and 2.3% for health promotion respectively. In term of providing care by activity, the cost of treatment was the highest cost, especially IPD and day care activities related to AIDS patients, while the cost of health promotion was the lowest.

This study found that after AIDS spread to community, two activities were added to the costing services i.e. health promotion and day care. Day care activity was provided directly for HIV/AIDS patients. Medical care, psychosocial support, and other support were also provided to patients. Home health care was one of the activities in day care. This activity involved visits by HIV/AIDS volunteers and health personnel. There were counseling clinics provided for the patients every day, and a TB clinic on Fridays at OPD. These activities were related to HIV/AIDS patients. MCH provided counseling for pregnant women, a premarital clinic, and AZT treatment for HIV/AIDS during pregnancy and new born case. Infants were fed by breast milk substitutes distributed to HIV-infected children and milk to pregnant women who have a low weight body.

The result of identifying general characteristics of HIV/AIDS patients in this hospital indicated that almost half of them were not covered by any health insurance or social welfare. Among those who had health insurance, the majority of the patients was from a low income group. These patients need support from the government and donors in order to cope with increasing expenses for care and treatment of HIV/AIDS.

These were the results and major findings of this study.

1) The cost burden of HIV/AIDS patients

The total cost of hospital was 21,468,723 Baht or US\$ 596,353 per year in 1998. As the 1998 cost per capita for Chun District was 447 Baht or US\$ 12. The proportion of cost for the hospital related to HIV/AIDS patients was 16.4% of total cost. Classification of cost by input; the capital cost was 4,845,021 Baht, and 15.1% of capital cost was for HIV/AIDS patients. Recurrent cost was 16,623,703 Baht, and 16.7% of recurrent cost was for HIV/AIDS patients. The recurrent cost of the hospital was 3.4 times greater than capital cost.

This study found that the cost burden for the HIV/AIDS patients led to higher cost for the provider. Thus, the Thai government should provide hospital care, community based care, and social support, so that patients can take care of themselves, and to decentralize some activities to community or health center. This essential information was important to serve for the allocation of resources. Half of the financial came from MOPH, while the least obtained from NGO. Thus, the hospital alone could not provide all the necessary care and support. So adequate support for efficiency HIV/AIDS patients should be provided. The proportion of cost for prevention was 16.7%, and 83.3% for the cost of treatment. The cost of treatment was high but the cost of prevention was still low. Prevention is preferable if people change their behavior, the number of HIV/AIDS patients would be decreased and the cost of the provider would be decreased as well. The demand for health care at government hospitals, both in-patients and out-patients was rapidly increased, owing to a substantial risen in the number of HIV/AIDS patients. It means that the cost burden of caring for HIV/AIDS patients would be increased beyond the capacity of hospital. Thus, policy makers have to decide appropriate resource allocation for hospital.

2) Incremental cost of hospital

The total cost of the hospital in 1992 and 1998 were 8,069,014 Baht, and 21,468,723 Baht, respectively. Comparison of the hospital cost in 1998 to 1992, using constant cost adjusted by Consumer Price Index in 1992, the hospital cost in 1998 was 15,471,590 Baht. The incremental cost of hospital increased by 7,402,576 Baht

(47.8%), and the cost for HIV/AIDS patient increased by 2,530,335 Baht (16.4%) after which AIDS spread to the district hospital. So the incremental cost for non-HIV/AIDS was 31.4%. This result of this study agreed with the hypothesis that the proportion of the cost on HIV/AIDS patients to the total cost of hospital tended to increase over time.

The increasing of the total cost during the year 1992-1998 were based on the rising of staff officers to 39% and an expansion from 10 to 30 beds in the hospital. In this study found that the service utilization did not increase as it should be. Because of slightly change of patients but the cost turned higher up. The first reason, the hospital might be less efficiency. The second reason was not increasing of population in the same area. The third reason was that the patients had a poor purchasing power or unable to afford to pay for the treatments in this hospital during the crisis situation. Due to the study it was found that the total cost of HIV/AIDS patients was more than the cost of general patients because of high consumption of medicine, labor and laboratory.

3) Additional of Financial Resources

In 1998, the total budget and financial resource of the hospital was 25,443,826 Baht. There are two sources of finance i.e. 75.9% from government and 24.1% from non-government and local. Additional finance resources for hospital was mostly from MOPH 50.5%, other ministries (25.4%), user fees (24.0%), and NGO (0.2%). For this year. additional resources were provided by the United Fund of Phayao Provincial Health Office, AIDS fund, health card fund, school fund, and low income fund. The incremental cost of HIV/AIDS patients was 2,530,335 Baht, but additional financial resources to HIV/AIDS was 436,950 Baht, so the general budget had been used mostly about 80% to cover increasing of the cost. We could not consider the additional fund for HIV as the equivalent of what HIV cost as it represented only zero of the incremental cost.

4) Unit cost

The result of this study showed that unit cost of HIV/AIDS and non-HIV/AIDS in-patients were 649 Baht and 531 Baht per day or 3,692 Baht and 1,000 Baht per patient respectively. The unit cost of HIV/AIDS and non-HIV/AIDS out-patients per visit was 153 Baht and 144 Baht. The unit cost in this study indicated that the unit cost of HIV/AIDS in-patients was higher than general patients. The reason was that a large proportion of

labor cost and medical cost were higher than other patients by 4.5 and 2.5 times respectively.

The cost of medical care for HIV/AIDS patients in Bamrasnaradura Hospital studied in 1995, was 19,752 Baht. The unit cost per patient was based on an average length of stay of 32 days. The unit cost of in-patients in hospital-based care per day was about 691 Baht. In comparing these figures, the unit cost of Bamrasnaradura hospital for in-patients per day was similar to this study. However, the cost of Bamrasnaradura hospital was focused only on medical care cost for HIV/AIDS patients and a longer average length of stay. Capital cost included buildings, equipment, and vehicles, but recurrent cost i.e. labor, material, operating and maintenance cost were not included. Thus, these figures could not be used for comparison because of the different criteria that was used for calculating the cost.

The unit cost of hospice care for HIV/AIDS patients at Wat Prabat Nampu in 1997 was 2,0643 Baht per day or 16,924 Baht per patient. For out-patients, it was 277 Baht per visit. Compare these figures, the unit cost of hospice care for in-patients per day and per patient were about 3.1 and 4.6 times higher than the hospital based care. These figures indicated that the cost of hospice care for HIV/AIDS patients was much higher than the hospital care. However, it was not rational to jump into this conclusion. Calculation of cost component was the same but availability care in hospitals and hospices was significantly different. The hospice care was provided directly and specifically for HIV/AIDS patients. As types of care in hospice were medical care and support for patients. The hospital care was aimed for treatment but day care was to support activity directly for HIV/AIDS patients and other health services had activities. For hospice care; one aims for prolonging life of patients, while the other aim was provided with a better quality of life in the rest of their time. So these figures could not be simply compared. In order to compare cost component, which was the same but the cost of these different care setting with different care objectives, various issues should be carefully considered.

The limitation of this research was that it was conducted under time constraints so some aspects could not be studied in details. It focused on the cost burden of HIV/AIDS from the provider's perspective. The cost of care and treatment by patients and their family were not included in the calculation of cost. The cost in this research was collected from primary data and secondary data. Labor cost and material cost were primary data. Operating cost was difficult to allocate for each health service and for HIV/AIDS patients because of separated bill for each activity was not provided. Rough proportion from records and interviews with health personnel was used to obtain the operating cost. For time of health personnel, observation and discussion were used to derive the time spent for each health service activity. The time of personnel was roughly calculated. The problem of cost calculation for HIV/AIDS patients was as follow. It was difficult to allocate the proportion of time for HIV/AIDS patients. The health personnel had many assignments and did many other jobs. The proportion of material cost for HIV/AIDS patients was not collected from the secondary data because these cost could not be divided for medicine, medical supplies, material supplies, laboratory test, and X-ray. This study used a sample to find the proportion. The unit cost of this study was less than in other research. The first reason was that this was a cost, not a charge. The second reason was a limitation for two weeks to collect data. So sample size might not be large enough, and some diseases were seasonal. This study was limited to the cost and types of care to symptomatic and asymptomatic patients, in-patients and out-patients. Some patients were in a latent period where no blood test for HIV was being undertaken. The proportion for HIV/AIDS patients was less than in the real situation. Secondary data could be used in this study to calculate medicine, medical supplies, X-ray, and laboratory cost, that implied the proportion of HIV/AIDS patients which might be changed and unknown for each of the cost.

5.2 Recommendations

This study confirmed that HIV had become a major burden on district hospitals of Northern Thailand. Prevention measurement was effective but the people infected during 1992-1994 were now symptomatic and needed care. HIV was becoming a

problem to be dealt with for the next few years. Prevalence has stabilized at around 4 to 5% in Phayao. AIDS patients will be part of the health care picture for many years onward. The following are some policy recommendations.

1) Decision have to be made regarding to how health resources should be allocated between health service activities of AIDS and other diseases as the cost of HIV were significant and could consume large quantities of resources.

2) The hospital should improve its standard service of care and set priority for resource allocation for good health at the low cost.

3) Attention to nationalize care for patients and funding in the most cost effective way is important. So, the hospital needs to improve technical efficiency through the qualified health personnel, good treatment, and emphasizing the health promotion.

4) Health personnel needed a continual education and up-dating of the disease and new information to provide the best quality at the lowest cost. The personnel should be improved for its efficiency treatment for HIV/AIDS patients, and thus to reduce cost.

5) Develop a referral system for HIV/AIDS: In term of providing care and support for HIV/AIDS, hospitals alone cannot provide all necessary care and support. Development of care providing system with a comprehensive approach is urgently needed. Decentralization is likely to lead to decrease the cost for the health system. With good linkages and good referral systems to exist health care providing systems, which are the community-based services and local health centers and based on a foundation of adequate support with a continual care approach.

Further studies on HIV/AIDS patients should emphasize the following aspects.

1) This study focused on only direct cost for the hospital which excluded indirect cost incurred by families of AIDS patients. The economic burden of treatment on AIDS should be studied for the hospital and the patients (travel, time, etc.) and how to minimize these costs. For policy maker, decision should pay more attention to reduce the cost burden of HIV/AIDS patients for the hospital and patients themselves which

would have an effect on the allocation of the government budget because of this problem was impact on the society and economy.

2) This study emphasized on cost of care for some activities related to HIV/AIDS patients. Further study should be conducted on all health service activities.

3) Compare treatment cost of HIV/AIDS with cost of other chronic illnesses.

4) Compare the cost of HIV/AIDS care in hospital and non-hospital setting. Further research on a comparison of cost analysis of care for people with HIV/AIDS in various health care setting recommended, in order to identify the effectiveness and efficiency way of providing care and support.

5) Cost-utility analysis of home -based and community - based care system as an alternative for hospital based care for HIV/AIDS patients.

6) Cost-effectiveness analysis for the allocation of government resources for HIV/AIDS patients at the hospital level by activity.