



## CHAPTER 5

### CONCLUSION AND RECOMMENDATIONS

#### 5.1 Conclusion

This cross sectional descriptive study analyzes the cost of HIV/AIDS activities at the health center level that is nearest to people in the service area. The objective of this study is to identify the components and the estimate cost of the existing package and an integrated core package of HIV/AIDS activities. The research was done to analyze cost to the provider including: 1) capital cost clarified to cost of building, equipment, vehicle, human capital, and 2) recurrent cost clarified to labor cost and supply cost. Otherwise, provider cost define the existing package and the integrated core package of HIV/AIDS activities to 5 categories as follow; 1) palliative care, 2) mother and child health, 3) home health care or home visitation, 4) management information system and paperwork, 5) health education and health promotion. This research studied and collected data at Tambon Lor Health Center. The primary data is collected from survey, observation, and discussion with health staff about supply usage and time allocation of health personnel for two weeks (22-66 Feb. and 8-12 Mar., 1999) and project to one year. Secondary data is capital cost, supply usage and some part of labor cost in the fiscal year 1998 (1Oct.,1997 to 30 Sep., 1998) collected from OPD card and in database. Otherwise, the quality data about financing, administrative budget and accounting of health center are collected by deep discussion with the director of Tambon Lor Health Center and all staffs. The current cost of capital obtained from records. Some are also obtained from the DHO and PHO. In this study, capital useful life came from expert opinion and references is 25 years for building, 10 years for vehicle, 10 years for human capital, and 5 years for equipment. World Bank discount rate of 10% is used to calculated cost of building, equipment, and vehicle. Discount rated of 5% from HCR, UNAIDS, and PAAC is used to calculate human capital cost. Medicine and supply cost collect from the patient record, and assuming cost of similar items from Chun Hospital, Phayao Hospital, Pharmacy Department, and current market price. The rough proportion cost for HIV/AIDS is total HIV visits over total visits that 1.8% used to allocate the cost for

HIV/AIDS activity of the existing package and 3.2% for cost calculation of an integrated core package of HIV/AIDS activities at health center level.

The result of this study contradicted the hypothesis of the study that the cost of the integrated core package of HIV/AIDS activities is less than the existing package of HIV/AIDS activities. This study found that the cost of an integrated core package of HIV/AIDS activities had many services and more costly than the existing package of HIV/AIDS activities. In the fiscal year 1998, total cost of the existing health package at Tambon Lor Health Center is 1,062,249 Baht including 474,946 Baht of capital cost, and 587,303 Baht of recurrent cost. Total cost of the existing package of HIV/AIDS activities is 54,032 Baht including 14,467 Baht of palliative care, 6,434 Baht of MCH, 16,308 Baht of HHC, 5,930 Baht of MIS and paper work, and 10,884 Baht of health education and promotion. Costs clarification of the existing package of HIV/AIDS activities by inputs are 8,475 Baht for capital cost and 45,547 Baht for recurrent cost. Unit cost of the existing package is 109 Baht per visit for palliative care, 56 Baht per visit for MCH, 480 Baht per person for HHC, 147 Baht per hour for MIS and paperwork, 64 Baht per service for HE and health promotion, and 982 Baht for total cost of an existing HIV/AIDS package per PWA. Both current costs of the existing health package and the existing package of HIV/AIDS activities the cost are more than the capital cost.

An integrated core package of HIV/AIDS activities is a set of essential health service associated with AIDS that are considered important and that society decides should be provided to everyone. Values such as quality, equity, cost effectiveness, transparency and solidarity explicitly or implicitly underlie these concepts. The development of this package is based on the premises as presenting in Chapter 4. Tambon authorities, health center staff, schoolteachers, community organizations are key actors in the support of the households. The package of HIV/AIDS activities at Tambon Lor Health Center is presently developing the core elements of the local effective package to respond to HIV/AIDS at sub-district level. Total cost of an integrated core health package with all kinds of the incremental cost is 1,193,248 Baht including 484,786 Baht of capital cost and 708,462 Baht of recurrent cost. Total integrated core package of HIV/AIDS activities is 190,338 Baht including 63,658 Baht for palliative care, 33,444 Baht of MCH, 22,334 Baht for HHC, 8,269 Baht of MIS and

paperwork, 57,317 Baht of health education and promotion. Cost components of the integrated core package of HIV/AIDS activities define by inputs is 18,316 Baht of capital cost that defined to 11,303 Baht for building cost, 3,349 Baht for equipment, 418 Baht for vehicle, and 3,246 Baht for human capital. And 166,706 Baht of recurrent cost derived to 32,765 Baht for labor cost, and 133,941 Baht for supply cost. The unit cost of the integrated core package is 260 Baht per visit for palliative care, 95 Baht per visit for MCH, 438 Baht per person for HHC, 207 Baht per hour for MIS and paperwork, and 305 Baht per service for HE and health promotion. 1,814 Baht per PWA is the unit cost of integrated core package of HIV/AIDS activities over total PWAs. This is a cost calculation of the essential package.

Cost comparison between the existing package and the integrated package of HIV/AIDS activities found that mentioned follow.

1) Total cost of 1,062,249 Baht for the existing health package is lower than 1,193,248 Baht of an integrated core health package. Cost of new package is 1.1 times higher than the existing one.

2) Total cost of 54,023 Baht for the existing package is lower than 185,022 Baht of an integrated core package of HIV/AIDS activities. Cost of new package is 3.4 times higher than the existing HIV/AIDS package.

3) Component cost of HIV/AIDS activities by inputs, all components of an integrated core package is higher than the existing one as mentioned.

(1) The capital cost of the existing package and the integrated core package of HIV/AIDS activities are similar if the integrated core package does not include counselling training for health staff and number of HIV visit and total visit do not change. Because both packages assumed to calculate same building, equipment, and vehicle cost. Total capital cost 8,476 Baht of the existing package is lower than 27,449 Baht of an integrated core package of HIV/AIDS activities because the proportion used for HIV/AIDS of new package is higher than an old package. In addition, 3,246 Baht of human capital cost is the component cost of the integrated core package of HIV/AIDS.

(2) Recurrent cost is most cost of the existing health package, existing HIV/AIDS package, integrated core health package, and integrated core HIV/AIDS package. Especially, the proportion recurrent costs of both HIV/AIDS packages are

about 80% of total cost, but the details of both packages are dissimilar. Percentage component recurrent cost of the existing HIV/AIDS package is 27% for labor, 72% for medical supply, and 1% for non-medical supply. Percentage component recurrent cost of an integrated core package of HIV/AIDS activities is 20% for labor, 65% for medical supply, and 14% for non-medical supply because this package concentrated community assessment; therefore, cost of non-medical supply is higher. Otherwise, total cost of supply for the integrated core package is more than the existing package of HIV/AIDS activities due to the new package is in-cooperation of more activities and greater use of material. Supply cost of the existing package of HIV/AIDS activities is 33,062 Baht. Supply cost of the integrated core package of HIV/AIDS activities is 133,941 Baht.

In terms of input, the unit cost of labor cost and material cost are constant. The unit cost of capital cost varied more than other costs.

4) Component cost of HIV/AIDS packages clarified by activities as the cost of palliative care, MCH, HHC, MIS and paperwork, HE and health promotion. Total cost of each activity of an integrated core HIV/AIDS package is higher than the old package.

5) Unit cost, this study found that all unit cost of an integrated core package of HIV/AIDS activities was higher than unit cost of the existing package, except unit cost of HHC. When health staff members provide more service of HHC to PWA, unit cost is diminished due to the economy of scale principle.

6) Total cost of HIV/AIDS package over total PWAs is 982 Baht per PWA for the existing package, and 1,814 Baht per PWA for an integrated core package of HIV/AIDS activities.

7) Total health package over total population due to implement HIV/AIDS activities, 318 Baht per person of the existing HIV/AIDS package is lower than 358 Baht per person of an integrated core package of HIV/AIDS activities.

In order to achieve equity in a health care financing, efficacy, effectiveness and efficiency, the key actors such as sub-district administrative authorities, health center staff, schoolteachers, and community organization are presently developing the integrated core package of HIV/AIDS activities from the existing package. Cost of the existing health package rises 11% to be an integrated core health package. An

integrated core package of HIV/AIDS activities is higher than the old one by 34%. The cost ratio of HIV/AIDS package and health package between the existing package and an integrated core package is 1:20 rising to 1:6 where the integrated core package includes all kinds of incremental cost that seem more increase of HIV/AIDS package.

According to government finance the transferred cost from the hospital to the health center, so a real integrated core package HIV/AIDS activities with real additional cost and health package is 10% of total cost for health package. Real additional cost per capita is 17 Baht per capita and real additional cost per PWA is 564 Baht per PWA. An integrated core package of HIV/AIDS activities with real additional cost per capita is 1,093 Baht. Cost of an integrated core health package per capita is 358 Baht per capita. The existing health cost proportion of 5% for HIV/AIDS is rising to an integrated core cost of 10% for HIV/AIDS that it could be the represent to conduct an integrated core package of HIV/AIDS activities. Cost of the new package is affordable and could be financed by government.

This study found that the cost of the integrated core package of HIV/AIDS activities is more than the old one; accordingly, cost of the new health package is also more than the existing health package of HIV/AIDS activities. The key actors considered that the new package is an essential package and more cost-effective than the old one. Although the integrated core package of HIV/AIDS activities is more costly than the existing package of HIV/AIDS activities, provider should still provide this package for PWAs to achieve equity and suppose right to the health care and government could finance it.

Problems of cost calculation for the existing HIV/AIDS package include 1) the existing package does not take into account present need, 2) health staffs have more works and services to do at health center and outside, 3) high hospital cost, 4) program of health center always change from the urgent meeting of PHO, DHO, weather, and they spent more times to joy the meetings. Health personnel could do more HIV/AIDS activities if paperwork was reduced, budgets were supported from hospital to health center, more improvements of community organization, for example, counselling by PWAs, teachers.

The limitation of this research is conducted under time constraints, so some aspects could not be studied in more details. The research only focuses on provider's perspective of cost of HIV/AIDS activities for patients and population in the service area. Cost for care and treatment incurred by patients and their family (i.e. personal health expenditure and user fees) are not included in the cost calculation in this study. This study focuses on the capital cost, material cost, and labor cost of provider to implement HIV/AIDS activities for PWAs and people in the service area. The health center does not provide some activities for PWAs due to the compulsive projects, such as ARV antenatal and postnatal prophylactic treatment. HIV positive pregnant women obtain ANC services at Chun Hospital. Some PWAs have never been to Tambon Lor Health Center, but have gone to hospital, so the health center may not have data records. For the cost in this research, the primary data and secondary data were used. Especially, health personnel time spent by using both observation and discussion their time spent for each activity, PWAs. Only observation health personnel time spent for two weeks is not enough because there are many activities that they do in the whole year. And discussion with health personnel also gets the rough of their time spent and cannot go into detail. Thus, health personnel time allocation is obtained observation and discussion with them. Observation HIV/AIDS patients used medical supplies for two weeks cannot calculate because there are less sample size, so medical supplies for HIV/AIDS patients must be collected from all OPD cards of HIV/AIDS visit in the whole fiscal year 1998.

## 5.2 Recommendations

Policy recommendation: The enjoyment of the highest attainable standard of living is one of the fundamental rights of every person being without distinction of race, religion, economics, social condition or political belief. Standard of living adequate for the health and well-being of person and the person family which includes food, clothing, housing and medical care and the right to security in the event of sickness, disability, etc. In order to achieve right to health and health care, the fairness and equity in health system should be available to all. Therefore, HIV/AIDS patients should have the same

right and equity to a standard of living at the same of other people due to they are parts of the society.

This study was conducted to learn the feasibility to implement the integrated core package of HIV/AIDS activities by health center at sub-district level and it found that it is possible to implement. The integrated core package of HIV/AIDS activities is more costly than present package, but it has more essential activities with standard quality that better than the old one due to considering of expert local managers and action team authority. The integrated core package of HIV/AIDS activities is the core elements of a cost-effective package to respond to HIV at sub-district level, and it is also the essential health package. Especially, both of coordination activities and specific activities of HIV/AIDS as mentioned at chapter 4 is more useful for PWAs and their community. This study found that the quantity and quality of HIV/AIDS activities, for example, palliative care, MCH, health education, and health promotion of the new package is more than the old one.

Capital cost and labor cost of the new package increase by a small amount. Thus, the quality or standard of the each activity in the future can estimate the rough cost by using material cost. Due to the policy of MOPH that is to provide standard of care so its necessary for health center to provide standard of treatment by using common drug list or drug from the same company, give the same drug to people, promoted health program of the key actor considered.

A good project cannot work if health centers lack of resource and the quality health personnel. The quality, efficiency and effectiveness of health service may be decreased when lack of health staff. In addition, the revenue of health center may be the cause of low quality of medicine and supplies. After that people confidence to health center may decrease.

There are many jobs for health personnel that more than they can do. They must respond to the policy of Ministry of Public Health and any level of managers although they lack of resources, health knowledge, experience, uncivilized of equipment, and supply than other health facilities. This study found that the director of health center spent more time for paper work and the urgent meeting. Government should solve this problem.

Further studies: this study should be carried out for one year of the implemented program that means only short-term effects can be determined. Then, for more information of the cost on provider side should be conducted HIV/AIDS activities in further studies.

1) Cost analysis of the integrated core package of HIV/AIDS activities compare between rural and suburban areas.

2) The feasibility to establish the integrated core package of HIV/AIDS activities throughout the country.

3) Quality control of an integrated core package of HIV/AIDS activities at health center.

4) Equity improvement of an integrated core package of HIV/AIDS activities by health center.