



## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Conclusions

This thesis aimed to study the management of costs for diabetics at OPD in Sena Hospital and to calculate the average cost per visit for the majority of patients in each of the 3 kinds of diabetes without complications, complication with hypertension and complication with heart disease. It includes an analysis of the utilization rates of the patients among Health Card holders and non-Health Card holders and the general characteristics of patients. It can be used for estimating the total care cost incurred in a year for providing service to one person from a provider's perspective.

The finding illustrates that the cost of diabetes varies according to complications and increased age. Cost per visit for the 3 kinds of diabetics were from highest to lowest: the elderly group (365.72 – 750.98 baht); Health Card holders (339.96 – 748.74 baht); and the out of pocket group (334.72 – 746.72 baht).

The results of the average utilization rate (visit per person per year) shows that the elderly consume the highest services (8.07). The out of pocket are moderate consumers (7.94) and Health Card holders are the lowest (7.91). The average utilization rate is slightly different among these 3 groups, because the physician has influence over requests for further and follow-up visits dependant on the severity of disease and the age factors.

The average annual cost ( per person per year) follows the same pattern of variance, depending on the severity of disease. The highest annual cost is the elderly group (2,655.13– 6,383.33 baht), followed by health card holders (2,461.31– 6,311.88 baht) and the out of pocket (2,413.33 – 6,294.85 baht).

Among the 3 groups of Health card holders, the out of pocket and the elderly, the general characteristic of a patient was that she was a primary educated farmer, living in the Sena District. Age appeared to be the only significant difference. In the Health card holders group, the majority were in the 56-60 years old group. The out of pockets was the reverse, the majority being in the 46-50 years old.

However, the cost of drug is the important component of the average cost per visit among these 3 groups. Particularly, when comparing the average cost between health Card holder diabetics and the out of pocket diabetics which was very different in sample sizes, these might effect the results in average cost per visit. In this study found that the average cost in the out of pocket was less than Health Card holders. One reason because the total cases or the representative sample in out of pocket diabetics was small for estimating drug cost by using cost to charge ratio. So, this result may not good enough for generalization in the whole pictures.

## **5.2 Recommendations**

Problems in the existing Health Card Scheme could lead to a necessary revision of criteria for card using such as screening the insured for chronic illness, such as diabetes, hypertension and heart disease. People with these diseases can still be insured, but should pay a premium that more accurately reflects their real cost

of treatment. Alternatively,

1. the number of visits should be clearly limited, and based on the real cost and real necessity;
2. a ceiling on expenses. When considering expenses per real unit cost, a ceiling of not more than 2,000 baht per visit might be considered. Such a ceiling would have to be estimated on the basis of the real cost of disease treatment, the volume of patients and be fair to the provider and Health Card holder; and
3. co-payment. If a ceiling on expenses is enforced, it may need to be softened by a co-payment system. If the cost per visit was more than the allocated 2,000 baht, the patient should be able to contribute to costs and pay the balance of expenses to cover necessary treatment. This would help reduced the cost burden to the provider.

### **5.3 Policy Implications**

Diabetes treatment incurs high average and annual costs because it is a chronic disease with various complications. Many diabetic patients using the Health Card in the public hospital system leads to poor cost recovery. The government should:

1. reconsider the difference in risk of illness in the population when setting the price for membership. The medical benefits covered by the Health Card should be set as a minimum standard and members can buy additional services at a higher price. This can help sustain the Health Card scheme in the long term; promote primary health education to

- foster a healthy population; and
2. emphasize health care prevention more than a purely curative approach.
- The cost for chronic disease treatment usually incurs huge expenditures and leads to the higher cost of curative treatment. Preventative education costs less. The Ministry of Public Health should play an important role in educating on measures, which can prevent disease and resultant loss of unnecessary expenditures for health care provider, and reduce the cost of this complicated disease.

#### **5.4 Limitations of the Study**

This is a retrospective study, so there are some significant limitations which may lessen its value. First, due to limitations of time for data collection, some assumptions were made for data analysis. The appropriate information to be collected directly from the hospital is prospective data for a few months. The result would be more reliable.

Second, there are no real unit costs available for some of the hospital services, such as the laboratory costs, drug costs, etc. It was difficult to calculate the real economic costs of those items. Some of the estimations could be based only on the hospital charges, which might be a little higher or lower than the real economic cost.

True evaluation of utility costs, like electricity and water supply, are hampered because, there is no meter to measure the quantity used, specific for the DM clinic. These cost were estimated by using the proportion of utility space used for a particular purpose. This was the allocation criteria.