

CHAPTER 6

DISCUSSION

The purpose of this study is to test the effectiveness of a new intervention program of video tapes about diabetic education plus nurse aid consultation, i.e., whether this program can result in the actual proportion of uncontrolled NIDDM no more than 15% when compared to the patients allocated to diabetic nurse educator consultation alone.

At the end of the study, fasting plasma glucose and HbA_{1c} were significantly reduced when compared to baseline values in each of the intervention and the control group ($p < 0.05$), but there was no statistically significant reductions of fasting plasma glucose and HbA_{1c} between the intervention and the control groups.

The proportion of uncontrolled NIDDM patients at the end of study who had fasting plasma glucose more than 140mg/dl in the intervention and the control showed no statistically significant difference. This finding indicated that the new program of video tapes about

diabetic education plus nurse aid consultation was not different from the standard diabetic nurse educator consultation.

The secondary outcomes which could achieve a statistical significance was a decrease in drug use pattern suggesting a good control of diabetes mellitus. It is important to note that the decrease in drug use pattern occurred more in the control group ($p < 0.05$). This results showed that education by diabetic nurse educators might have a positive influence on the diabetic control. Other outcomes such as knowledge, change of body weight and recall of practice showed no statistically significant difference in the intervention and the control group.

The effect of changes of physicians during the study happened more in the intervention group. The changes of the physicians during the study could adversely influence the proportion of uncontrolled NIDDM patients in the intervention group regardless of the definitions for a poor control (FPG > 140 mg/dl or $< 1\%$ reduction of HbA_{1c}). This finding suggested that the physician-patient relationship may affect treatment

outcomes. The trust and acquaintance that the patients got from a continuity of care may lead to a confidence in treatment, a change of the attitude towards disease and treatment and finally a change toward good practices.

There was a correlation between the reduction of HbA_{1c} more than 1% and the reduction of diabetic complication such as diabetic nephropathy^[38]. In this study, there was no statistically significant difference between the two educational strategies regarding the number of diabetic patients who had \geq 1% reduction of HbA_{1c} at the study.

An economic evaluation was undertaken using the viewpoint of the hospital' administrators. The cost of the program of the video tapes about diabetic education plus nurse aid consultation and diabetic nurse educator consultation per one patient were 2,605.18 and 2,918.10 Baht respectively. The cost/good control NIDDM was higher in the intervention group than in the control group, but the cost/ \geq 1% reduction of HbA_{1c} in the intervention group was slightly lower than in the control group. There were no threshold observed when sensitivity analysis were carried out on the above variables.

The subjects in this study were the known poorly controlled diabetic subjects who were familiar with their disease(DM), so they might not have any significant change in their motivations for better control. Also, adequate control might be difficult when diabetes mellitus advance to a certain stage. If we can recruit the newly diagnosed diabetic patients who were eager to learn about diabetic education and clinical course of DM, the results of the study may be different but it was impossible for this study to recruit only newly diagnosed diabetic patients because of time constraints. The effectiveness of video tapes used in the intervention program should be reevaluated and improved to enhance the patients understanding and the relevance to the lifestyles of diabetic subjects.

CONCLUSIONS

The new program of video tapes about diabetic education plus nurse aid consultation which was introduced in this study did not result in any significant change in the proportion of good control of diabetes mellitus when compared to the standard diabetic

nurse educator consultation. There was a decrease in diabetic drug use in both groups. In Thailand, there is an inadequate number of diabetic nurse educator, the new intervention program of diabetic education can be used in some situation in order to facilitate knowledge and attitude to the diabetic patients. The cost effectiveness of the new program was higher than the standard diabetic nurse educator program. The cost of video tape production constituted a significant share of the new program. If the cost of video tape production can be reduced or the video tape can be more widely used, then the new program may be a viable alternative to the standard diabetic education, particularly when the actual salary of the nurses in cost calculation dose not reflect the investment and the government subsidy for their education.