

## **CHAPTER V**

### **PRESENTATION**

A presentation was made on the day of the defense using the slides as shown in the next few pages. The slides are arranged in the order of presentation.

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**THESIS TITLE**

**Education based on  
Home Health Care :  
A strategy to improve  
self care ability  
of poorly controlled blood  
glucose level  
Non-insulin-dependent  
diabetes mellitus**

**ISSUE**

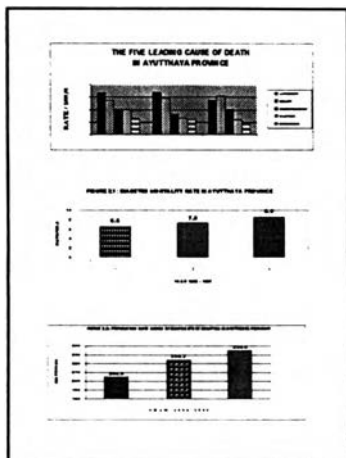
**What strategy can improve  
self care ability  
of the poorly controlled  
blood glucose level NIDDM  
in Nakornluang Hospital ?**

**The problem situation**

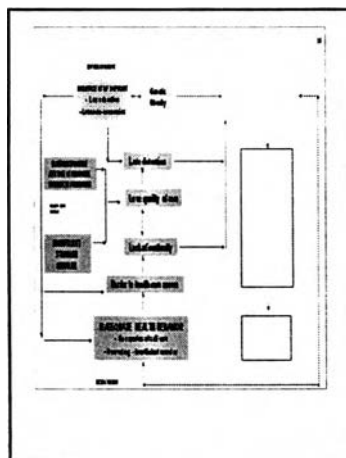
\* Diabetes mellitus can be defined as a chronic disease associated with abnormally high level of glucose in the blood (an energy source for cells and tissue throughout the body), it occurs when the body does not make enough insulin or when cell can not make use of the available insulin.

- \* NIDDM affects about 90% of population in Thailand, the prevalence is 3.26 % , and 37.6% of the cases are known and diagnosed.
- \* NIDDM is strongly associated with increased risk of atherosclerosis.
- \* CHD is also a frequent finding in prediabetes and in NIDDM subjects at the moment their disease is diagnosed.

- \* In Ayutthaya, NIDDM is one of the five major non-communicable diseases and caused of illness, inpatient department load, and the mortality rate are increasing year by year from 1995-1997.
- \* In 1998, 66 % of NIDDM patients were seeking for registered at 14 community hospital.
- \* Mortality rate are increased in 1995 from 7.2 to 8.5 in 1997, and in 1998 DM is one in ten of the caused of death in Ayutthaya.



- Miscommunication between patients and providers about important components of diabetic care has repeatedly been educated
- In 1997 there are 71 % of NIDDM patients who are the poorly controlled of blood glucose level (FBS > 140 mg%) (studied at March - May 1997)



- WHAT COULD BE DONE**
- Personnel development
  - Reeducation by using Education based on home health care to reinforce for self care behaviors
  - Continuous quality improvement of diabetes standard guideline

**The effects of Education Based on Home Health Care aiming at Improved Self Care Ability in Poorly Controlled Blood Glucose Level Non-Insulin-Dependent Diabetes Mellitus (NIDDM)**

**Operational Definitions**

**Education based on Home Health Care :**

is a part of comprehensive health education to promotes, maintains or restores health and should be individualized to the patients including achieving successful self care management in the patients home environment.

## **Health education**

is primarily a specialized communication process, and nursing emphasizes the concepts of communication and process within its practice.

## **Home health care**

is that component of a continuum of comprehensive health care whereby health service are provided to individuals and families in their places of residence for the purpose of promoting, maintaining or restoring health.

## **Self care ability**

is individual's abilities and characteristics essential for performance of self care activities regarding to diabetic knowledge, attitude towards decision-making, and practice. It refers to (a) DM definition, symptoms & signs and treatment (b) diet control, (c) exercise, (d) complication and (e) foot care.

Knowledge refers to the understanding of (a) the general of DM regarding to definition, symptoms & signs, and treatment, (b) complication, (c) diet control, (d) exercise, and (e) foot care.

Practice refers to productive - operations in order to diet control, medication, exercise, foot care and giving correct answer about how to prevent diabetic complication.

**Attitude towards decision-making** is the feeling and beliefs that largely determine how the patients will perceive their environment and what they want to have or to be done to them related to self care behavior of diabetic control and preventable or the feeling and beliefs what the patients think is true with respect to what they or health providers know or behave.

## **Poorly controlled non-insulin dependent diabetes mellitus (NIDDM)**

NIDDM patients with more than 3 months duration of treatment of disease aged 40-70 years, and who have a fasting blood sugar (FBS) more than 140 mg% at least twice before recruitment.

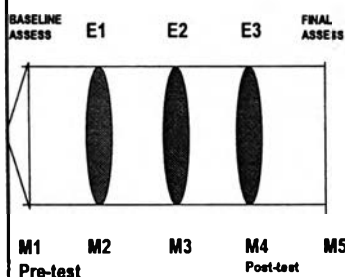
### General Objective

To find out an appropriate model of education based home health care for improving self care ability among poorly controlled NIDDM who are registered at the NKL diabetic clinic.

### specific Objectives

- To compare the level of the knowledge, decision-making and practice in the poorly controlled NIDDM patients who receive education based on home health care through comparison from pretest and posttest scores versus those receiving routine education service
- To compare the level of blood glucose among poorly controlled NIDDM
- To determined the effects of education based on home health care for self care ability

### STUDY DESIGN



### OUTCOME

**Primary outcome:**  
Self care ability

- \* Knowledge
- \* Decision-making
- \* Practice

**Secondary outcome:**

- \* Fasting blood glucose

### General Objective:

- To assess knowledge, decision-making, and practice about diabetic self care of the poorly controlled NIDDM in NKL hospital

### Specific Objective:

- To describe self care ability among the poorly controlled NIDDM in NKL hospital
- To test the data collection instruments designed and pre-test for clarification and suitability of validity and reliability

**Crossectional survey is used as the research methodology.**

**The study area: diabetic clinic in NKL hospital.**

**The target population : 491.**

**They were selected purposively for the study : 15**

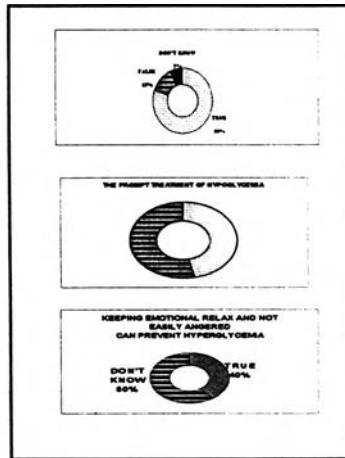
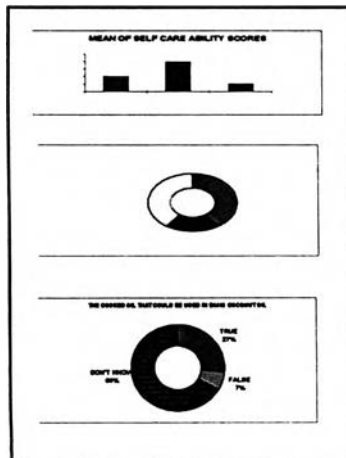
**Inclusion Criteria :**

- **NIDDM patients with more than 3 months of treatment, aged 40 and over with a fasting blood glucose level of more than 140 mg % at least twice consecutively before selection.**

- † **Having no serious health problems including stroke, acute myocardial infarction, dementia and blindness.**
- † **Had not had a history of psychosis or neurosis.**
- † **Voluntary participation in the study and able to comprehend verbal instructions.**

**Exclusion Criteria :**

- † **Insulin dependent diabetes**
- † **NIDDM patients with the following conditions:**
  - **severe obvious visual problems,**
  - **a history of stroke confirmed by physical examination,**
  - **an evidence of a myocardial infarction detected by electrocardiograph within 6 months before selection,**
  - **a poor cognitive function and any underlying conditions that could prevent adherence to the study protocol,**
  - **an evidence of a severe renal insufficiency (serum creatinine more than 3 mg/dl).**



### RESULT

- Most of subjects (86.7 %) were female
- Majority of age ranged were between 44 to 70 with a mean of 59.07.
- 73.3 % were married , 80 % of housewife or a head of family.
- 80 % primary school, 13.3 % secondary school and 6.7 % illiterate.
- 46.7 % Income < 5000 per month

- The average of duration having NIDDM was 3.87 years, with a range of 1 to 7 .
- There was no subject who take only diet control, and only one subject who take oral drug plus insulin injection.
- The mean of FBS was 195.07 mg% ranging from 156 mg% to 287 mg%.
- The mean of body weight was 56.7

### Knowledge

- ✖ 80% Patients should take oral drug one hour before meal (Incorrect response)
- ✖ They don't know the following items:
  - 66.7% Coconut oil could be used in DM
  - DM is the disease which can be completely cured
  - Keeping emotional relax can prevent the increasing of blood sugar level (60%)

### Don't know

- The prompt treatment of hypoglycemia  
The type and timing of exercise (53.3%)
- 46.7 The symptoms of hypoglycemia and 40% hyperglycemia.
- 40% Patients should have eye examination once a year
- 40% Prolonged uncontrolled DM can cause the complication

### DECISION-MAKING

- 👍 **STRONGLY AGREE**
- 60 % " If I have had fatigue, thirsty and dry mouth, I have promptly decided to consult the doctor "
- 53.3 % " I prefer self care to seek helping from other people in order to control blood glucose level and prevent complication",
- " I have decided to check my blood sugar and visit the doctor regularly "
- " I have decided to select soybean oil for cooking "

### UNCERTAIN

- 40 % " have decided to behave properly, eating, exercise, take medicine and self care ",
- " have determined to have any food or beverage between meal ",
- " intend to ask the physical for the effect and side effect of drug "

### STRONGLY DISAGREE

40% " When I feel better, I have decided to stop the oral diabetic medicine by myself "

33% " It is not my choice to take time to travel or join in society. "

## Practice

### OFTEN

60% have received blood sugar level checking regularly and visit the doctor's appointment.

### SOMETIMES

73.3% can keep self relax by reading, listening, watching and playing sport when have stress.

53.3% can eat limited starch, fat, sugar but unlimited vegetable with leaves .

### NEVER


73.3 % never carry some candies or sweet foods when travel or exercise for having symptoms of hunger, sweating and dizziness.


53.3% never walked bare foot outside the house.


33.3% never stopped eating oral drug by themselves when get improved.

## DISCUSSION

The further descriptive analysis of findings indicates that some subjects had a relative knowledge deficit and limitation of decision-making and practice partially existed.

 The subjects' diabetic knowledge in definition, hypoglycemia & hyperglycemia symptoms and preventing complication items were actually relative weak.

 By using this questionnaire to assess self care ability, it is implied that the findings can be used as a supportive evidence for the needs assessment of patients and health care providers.

 Selections from these findings can be used to prepare self care educational and provide input to a home health care planning program related to improved self care ability.

## LIMITATION

1. The sample size of this study was relatively small, these subjects can not represent the poorly controlled NIDDM in NKL hospital.
2. The findings of this study are relatively limited. The subjects were obtained by using purposive sampling . Using one or two patient in 12 sub districts, this sample may or may not be representative of all patient's problems in NKL district. It will be have further study.



3. It may be explained that some items of the questionnaire <sup>with</sup> was not appropriate for the subjects and would be considered, and revised.

4. Potential errors in measurement were discovered when observed behavior did not correspond to <sup>the</sup> patients answer <sup>to</sup> the questionnaire.

#### LESSON LEARNED

1. Findings show that there is lack of knowledge in many aspects of diabetic self care, the need for improving the existing health education are provided and reinforced more efforts on the weakness of self care ability.
2. The content and methods for diabetes education should be revised to be more meaningful to client's need and consider the multidimensional of both subjective and objective data.

3. It is learned that content validity was confirm by the experts in diabetic self care education model, if the instrument is valid, it is measuring the right thing. In this study some items of the instrument were revised.

4. The alpha calculated by a computer SPSS, the reliability coefficient to analyze knowledge, decision making and practice after data exercise was 0.8, 0.9, and 0.5 respectively, it is accepted.