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Appendix 1

Video tapes about diabetic education

Video tapes about diabetic education consist of four volumes including

1. The first volume describes the general knowledge about diabetes mellitus, symptoms and signs of untreated diabetes, acute complications e.g., hypoglycemia, diabetic ketoacidosis and chronic complications e.g., diabetic retinopathy, diabetic nephropathy, cerebrovascular disease and diabetic foot.

2. The second volume touches upon the issues of diabetic control. The contents are the types of complex carbohydrates e.g., steamed rice, cooked sticky rice, noodle, "Kanom-jeen" and slice of bread and the way of exchange portions. It also describes the types of protein, fat and fruits especially high fiber fruits such as guava, apple and Thai-apple.

3. The third volume characterizes the various aspects of exercises, including the importance and benefit

of the exercise, types, duration, frequency of exercise and the proper management before and after the exercise.

4. The fourth volume is about foot care, i.e., the ways to look after the feet which include cleaning, looking for & managing the wound or ulcer and the behavior of wearing the new pair of shoes.

The video tapes in this study are the video tapes which were produced for the study of Achananuparp⁽¹⁵⁾. These video tapes had not been validated properly for the study. Some modifications of the video tape was done with the permission from the original investigator. One volume of video tape about exercise was produced by the investigator. Before using in this study the video tapes were validated by three expertise endocrinologists from Chulalongkorn hospital, Rajvithi hospital and Pramongkutkiao hospital.

Appendix 2


Questionnaire

Knowledge of diabetic patients of Pramongkutklao hospital

Explanation

This questionnaire is a part of a research project of Dr. Ampha Suthijumroon. The results of this study will be used to improve diabetic care. Please answer this questionnaire faithfully in order to benefit others. Your information will be kept confidential and will be expressed as an overview after analysis of the total study sample.

Thank you for your kindly co-operation.



(Ampha Suthijumroon, M.D.)

Principle investigator

Descriptive data of the patients

- Date _____ (DD/MM/YY) V1 [] [] [] [] [] []
- Number _____ V2 [] [] [] []
1. Sex [] male [] female V3 []
2. Age _____ years V4 [] []
3. Marital status V5 []
- [] single [] married
- [] divorce [] separated
4. Occupation V6 []
- [] government [] housewife
- [] private sector [] others _____
5. Education V7 []
- [] illiterate [] primary school
- [] secondary school [] high school
- [] vocational school [] bachelor degree
- [] M Sc. [] others _____
6. Duration of diabetes mellitus _____ years V8 [] []
7. Duration of treatment of DM _____ years V9 [] []
8. Duration of treatment of DM in Pramongkutklao hospital V10 [] []
9. Treatment status V11 []
- [] diet control [] oral hypoglycemic agent
- [] insulin [] oral hypoglycemic agent plus insulin
10. You got knowledge about diabetes mellitus from (more than one answer) V 12 [] [] [] [] [] []
- [] physician [] nurse
- [] relatives [] friend
- [] others _____
11. You got knowledge about diabetes mellitus from (more than one answer) V13 [] [] [] [] [] []
- [] radio [] video tapes
- [] television [] newspaper
- [] pamphlets [] others _____
12. The media which you prefer for diabetic education (please give rating from 1 is the best, 2 is the second and 3 is the least)
- [] television [] video tapes
- [] radio [] newspaper
- [] pamphlets [] others _____

Please circle in front of one right answer

1. Diabetes mellitus is the disease V14 []
A. caused by food poisoning
B. caused by contaminated infection from neighborhood
C. caused by eating large quantity of sugar
/ D. with high blood sugar
2. The symptoms of prolong untreated diabetes mellitus is/are V15 []
A. drink less water
B. polyuria, weight gain
/ C. polyuria, weight loss
D. dizziness
3. The diabetic patients should behave properly about V16 []
A. diet control, exercise
B. taking oral medication or injection following to physician's prescription
C. self-care
/ D. all of the above
4. Diabetes mellitus will cause the complications in V17 []
A. heart
B. brain
C. kidney
/ D. nearly every organ in the body
5. The diabetic complications can be prevented by V18 []
A. prompt treatment of complication whenever the symptom occur
/ B. early detection and treatment of diabetes mellitus
C. no preventive way
D. nothing to do, it is physician's responsibility

6. After you was diagnosed diabetes mellitus, when should you have eye examination by ophthalmologists? V19[]
- A. immediately after diagnosis of DM
 - B. when blurred vision occurred
 - C. once in a year
 - / D. all are correct
7. If you got the physician's prescription of taking oral hypoglycemic drug 1 tablet before meal, you should take V20[]
- A. right before meal
 - B. 5 minutes before meal
 - C. 10 minutes before meal
 - / D. 30 minutes before meal
8. The diabetic patient with hypoglycemia will manifest with V21 []
- A. hunger
 - B. palpitation, sweating
 - C. dizziness
 - / D. all of the above
9. The prompt treatment of hypoglycemia is/are V22 []
- A. taking candy
 - B. drinking sweet syrup
 - C. drinking soft drink
 - / D. all of the above
10. The diabetic patients with hyperglycemia will manifest with V23 []
- A. fatigue
 - B. thirsty
 - C. dry mouth
 - / D. all of the above

11. The prompt treatment of hyperglycemia at home V24 []
is/are
- / A. drinking large amount of water
 - B. taking herbal medicine
 - C. taking more tablet of oral hypoglycemic agent
 - D. all are correct
12. The diet control in diabetic patient is/are V25 []
- A. eating one meal per day
 - / B. eating adequate amount of food three times per day
 - C. eating anything you like
 - D. quit all meal
13. Which kind of food that the diabetic patients V26 []
can eat unlimited?
- A. sweet flavor food
 - B. salty flavor food
 - C. food with coconut milk
 - / D. vegetables with leaves
14. The cooked oil that should be used in the V27 []
diabetic patients is
- A. palm oil
 - B. coconut oil
 - / C. soybean oil
 - D. pork oil
15. How often should you control starch and sugar V28 []
in your life style?
- A. no need to control
 - B. seldom control
 - C. scarcely control
 - / D. control regularly

16. The benefit of exercise in diabetic patient is/are to V29 []
- A. have no benefit
 - B. facilitate good diabetic control
 - C. produce less complication
 - / D. B and C
17. You should perform the exercise ___ times per week V30 []
- A. 1
 - B. 2
 - / C. 3
 - D. 4
18. How long should you exercise each time? V31 []
- A. 5 - 10 minutes
 - / B. 15 - 30 minutes
 - C. 60 minutes
 - D. more than 60 minutes
19. Which type of exercise should the diabetic patient do? V32 []
- A. walking at least 15 minutes
 - B. jogging
 - C. aerobic exercise
 - / D. all are correct
20. How often should you examine your feet? V33 []
- / A. every day
 - B. every 2-3 days
 - C. every week
 - D. every month
21. The good foot care include (s) V34 []
- A. examine the foot and foot sockets for wound
 - B. wash the foot and dry with soft towel
 - C. not walk with bare foot
 - / D. all of the above

22. How should you manage with the new pair of shoes? V35 []
- A. wearing suitable size of shoes, neither small nor big
 - B. wearing new shoes less than one hour per day
 - C. men should wear socks and use one pair per day
 - / D. all of the above
23. You should not use the following antiseptics for the wound V36 []
- A. alcohol
 - B. merthiolate
 - C. betadine
 - / D. tincture iodine and hydrogen peroxide
24. How often should you exercise your feet? V37 []
- / A. everyday
 - B. every 2-3 days
 - C. every week
 - D. every month

Appendix 3

Recall of diabetic practice

Name _____ Number _____ V1 [] [] []
 Date _____ (DD/MM/YY) V2 [] [] [] [] [] [] [] []

Please mark / in front of one right answer

1. Diet control

A. 24 hour recall of diet control

1. Yesterday you ate sweet dessert yes no V4[]
2. Yesterday you ate excess amount of sweet fruits yes no V5[]
3. yesterday you ate vegetables with leaves yes no V6[]
4. yesterday you ate proper amount of food at the exact time yes no V7[]
5. yesterday you cooked with vegetable oil yes no V8[]
6. yesterday you ate high fiber fruit e.g., guava, apple or Thai-apple yes no V9[]
7. record of food intake in the past 24 hour V10 [] [] [] []

	Type	Amount
breakfast	_____	_____
	_____	_____
snack	_____	_____
	_____	_____
lunch	_____	_____
	_____	_____
snack	_____	_____
	_____	_____
dinner	_____	_____
	_____	_____

snack

_____	_____
_____	_____
_____	_____

B. Recall in the past week

- 1. you drank soft drink yes no V11
- 2. you drank sweet syrup yes no V12

2. Exercise

- 2.1. Yesterday you performed
the exercise. yes no V13
- 2.2. In the past week, you
performed the exercise. yes no V14

If your answer is yes, then answer
the following questions

- 2.2.1. Please specify type of exercise V15
 - walking yes no
 - jogging yes no
 - aerobic exercise yes no
 - others _____

- 2.2.2. How many times of exercise per week? V16
_____ times

- 2.2.3. The duration of exercise in each time. V17
_____ minutes

3. Foot care

A. 24 hour recall

1. Yesterday you examined your feet. yes no V18[]
2. Yesterday you washed your feet with soft soap and dry with soft towel. yes no V19[]
3. Yesterday you look for the wound at at the feet and feet sockets. yes no V20[]
4. Yesterday you exercised your feet. yes no V21[]
5. Yesterday you wore proper size of shoes. yes no V22[]
6. Yesterday you walked barefoot inside the house. yes no V23[]
7. Yesterday you walked barefoot outside the house. yes no V24[]

B. Practice in special conditions

1. When you had a wound, you used tincture iodine. yes no V25[]
2. When you had a wound, you used hydrogen peroxide. yes no V26[]
3. When you had a wound, you used betadine. yes no V27[]
4. When you had the new pair of shoes, you wore _____hour per day. V28[]

Appendix 4

Module of diabetic teaching for nurse aid

1. The pre-test questionnaire and oral examination about diabetes mellitus were evaluated. The questions included general overview of diabetes mellitus, diet control, exercise and foot care. The questionnaires and questions of oral examination included the objectives of this teaching were shown in Appendix 5.

2. The researcher provided the three session teaching for the nurse aid in three days. The time for each session were 60 minutes. The first session started with the first video tape about

A) general overview of diabetes mellitus

B) symptoms and signs of untreated diabetes mellitus

C) methods of diabetic treatment(diet control, exercise and drug therapy)

D) complications of diabetes mellitus: acute and chronic type. The researcher specified the goal of this session that covered the knowledge in the video tape and will performed the lecture about the knowledge that covered the goal.

On the second day, the second video tape was used. The contents included

- A) diet control
- B) type of food and fruits
- C) way of exchange the portions of food.

The subsequent lecture that covered the knowledge in this video tape was provided for 30 minutes. The questions and answers about the problem was last for 15-20 minutes. The third day of teaching started with the video tapes about exercise and foot care with the contents of

- A) importance and benefit of the exercise
- B) types of exercise
- C) time and duration of the exercise
- D) proper type of exercise which is suitable for individual diabetic patient.
- E) methods of taking care of the feet
- F) how to manage whenever the patients have the wound or ulcer
- G) behavior of wearing the new pair of shoes.

The questions and answers of this session were also subsequently discussed.

3. The post-test questionnaire and oral examination were administered at the end of the third session. The evaluators were two endocrinologists that accepted her knowledge in diabetic teaching. Re-training and re-evaluation were done before starting the educational program for the patients.

Appendix 5

Modules of the video tapes about diabetic education plus nurse aid and diabetic nurse educator consultation

The intervention group and the control of diabetic patients were divided into fifteen groups, there were 20 patients in each group. The subjects attended the hospital on the separate special appointment day to prevent contamination.

Program 1 represented the video tapes about diabetic teaching plus nurse aid consultation.

Program 2 represented the diabetic nurse educator consultation.

There were three sessions in program 1 and program 2. The first session covered the knowledge about general overview of diabetes mellitus (DM) and complications of DM. The second session contained the knowledge about diet control and the third session covered

the knowledge about exercise and foot care. The details of program 1 and program 2 were shown as follow:

I. First session

	Program 1	Program 2
1. Time(minutes)	30	30
2. Objectives: able to tell or explain		
2.1. general knowledge of DM	/	/
2.2. complications of of DM	/	/
3. Contents		
3.1. general knowledge of DM		
3.1.1. definition of DM	/	/
3.1.2. symptoms and signs of untreated patients	/	/
3.1.3. treatment of DM	/	/
3.2. complications of DM		
3.2.1. hypoglycemia	/	/
3.2.2. diabetic retinopathy	/	/

	Program 1	Program 2
3.2.3. diabetic nephropathy	/	/
3.2.4. cerebrovascular disease	/	/
4. Methods		
4.1. group education	/	/
4.1.1. introduce each other	/	/
4.1.2. knowing the objective of the study	/	/
4.2. pre-test questionnaire	/	/
4.3. teaching media	video tapes	slides, flip charts, pamphlets
4.4. educator	nurse aid	nurse
4.5. discussion and answering the questions about this session	/	/
5. Evaluation		
- group education monitoring	<-observe and record participation->	

II. Second session

	Program 1	Program 2
1. Time(minutes)	30	30
2. Objective: able to know and choose appropriate diet		
2.1. diet control	/	/
3. Contents		
3.1. kinds of complex carbohydrate and exchange portions	/	/
3.2. kinds of protein	/	/
3.3. kinds of fat and proper cooked oil	/	/
3.4. kinds of fruits sweet fruits	/	/
high fiber fruits e.g. guava, apple	/	/
4. Methods		
4.1. - group education - knowing the objective of the study	/	/
4.2. Recall of diabetic practice	/	/

	Program 1	Program 2
4.3. teaching media	video tapes	slides, flip charts, pamphlets
4.4. educator	nurse aid	nurse
4.5. discussion and answering questions about this session	/	/
5. Evaluation		
group education monitoring	<- observe and record participation->	

III. Third session

	Program 1	Program 2
1. Time (minutes)	30	30
2. Objectives and contents		
2.1. Objectives of exercise		
2.1.1. importance and benefit of exercise	/	/
2.1.2. types of exercise	/	/
2.1.3. frequency of exercise per week	/	/

	Program 1	Program 2
2.2. Contents of exercise		
2.2.1. exercise causes good		
glucose control	/	/
2.2.2. types of exercise		
(walking, jogging etc.)	/	/
2.2.3. adequate exercise/week		
(at least 3 times/week)	/	/
2.3. Objectives of foot care		
2.3.1. methods of taking		
care of feet	/	/
2.3.2. management of wound/ulcer	/	/
2.3.3. behavior of wearing the		
pair of shoes	/	/
2.4. Contents of the foot care		
2.4.1. daily examination of feet	/	/
2.4.2. antiseptics can not use		
for wound and ulcer		
(hydrogen peroxide)	/	/
2.4.3. walking without shoes		
is prohibited	/	/
2.4.4. behavior of wearing the		
new pair of shoes	/	/

	Program 1	Program 2
3. Methods		
3.1. - group education	/	/
- knowing the objective of the study	/	/
3.2. recall of diabetic practice	/	/
3.3. teaching media	video tapes	slides, flip charts, pamphlets
3.4. educator	nurse aid	nurse
3.5. discussion and answering questions	/	/
4. Evaluation		
- group education monitoring	<-observe and record participation-->	
- post-test questionnaire	/	/

The recall of diabetic practice was recorded at the end of three months after finishing the diabetic teaching.

Appendix 6

Form of data entry

1. Code number_____	V1 [][][]
2. Name_____	V2 [][][][][]
3. HN _____	V3 [][][][][]
4. Drug use pattern	V4 []
Type Dose	
day0 _____	code 0 = no change
_____	1 = increase
_____	2 = decrease
M1 _____	V5 []

M2 _____	V6 []

M5 _____	V7 []

day0 Name of physician	V8 []
_____	code 1 = Ampha
	2 = Yupin
	3 = Apussanee
M1 Name of physician	V9 []

M2 Name of physician	V10 []

M5 Name of physician	V11 []

5. Fasting plasma glucose

day0	5.1.	date_____	V12	[] [] [] [] [] [] []
	5.2.	collection time_____	V13	[]
	5.3.	value_____	V14	[] [] []
M2	5.4.	date_____	V15	[] [] [] [] [] [] []
	5.5.	collection time_____	V16	[]
	5.6.	value_____	V17	[] [] []
M5	5.7.	date_____	V18	[] [] [] [] [] [] []
	5.8.	collection time_____	V19	[]
	5.9.	value_____	V20	[] [] []

6. HbA1c

day0	6.1.	date_____	V21	[] [] [] [] [] [] []
	6.2.	collection time_____	V22	[]
	6.3.	value_____	V23	[] [] []
M2	6.4.	date_____	V24	[] [] [] [] [] [] []
	6.5.	collection time_____	V25	[]
	6.6.	value_____	V26	[] [] []
M5	6.7.	date_____	V27	[] [] [] [] [] [] []
	6.8.	collection time_____	V28	[]
	6.9.	value_____	V29	[] [] []

7. Knowledge

day0	7.1.	date_____	V30	[] [] [] [] [] [] []
	7.2.	collection time_____	V31	[]
	7.3.	value_____	V32	[] []
M2	7.4.	date_____	V33	[] [] [] [] [] [] []
	7.5.	collection time_____	V34	[]
	7.6.	value_____	V35	[] []

8. Body weight

day0	8.1.	date_____	V36	[] [] [] [] [] [] []
	8.2.	collection time_____	V37	[]
	8.3.	value _____	V38	[] [] [] []
M2	8.4.	date_____	V39	[] [] [] [] [] [] [] []
	8.5.	collection time_____	V40	[]
	8.6.	value _____	V41	[] [] [] []
M5	8.7.	date_____	V42	[] [] [] [] [] [] [] []
	8.8.	collection time_____	V43	[]
	8.9.	value _____	V44	[] [] [] []

9. Recall of practice

day0	9.1.	date_____	V45	[] [] [] [] [] [] [] []
	9.2.	collection time_____	V46	[]
	9.3.	value _____	V47	[] [] []
M1	9.4.	date_____	V48	[] [] [] [] [] [] [] []
	9.5.	collection time_____	V49	[]
	9.6.	value _____	V50	[] [] [] []
M2	9.7.	date_____	V51	[] [] [] [] [] [] [] []
	9.8.	collection time_____	V52	[]
	9.9.	value _____	V53	[] [] [] []
M5	9.10.	date_____	V54	[] [] [] [] [] [] [] []
	9.11.	collection time_____	V55	[]
	9.12.	value _____	V56	[] [] [] []

10. Duration of DM

V57 [] []

code 1 = \leq 10 years

code 2 = $>$ 10 years

11. Age

V58 [] []

code 1 = \leq 60 years

code 2 = $>$ 60 years

Appendix 7

INFORMED CONSENT

I am completely informed about the study objective, the teaching program of diabetic education and the benefit which I can gain from this study.

I agree to answer the questions in the questionnaire and participate in the study.

I understand that there will be no harm in the study program and I will receive a lot of knowledge and practice for the care of my diabetes mellitus .

Patient signature _____
()

Witness signature _____
()

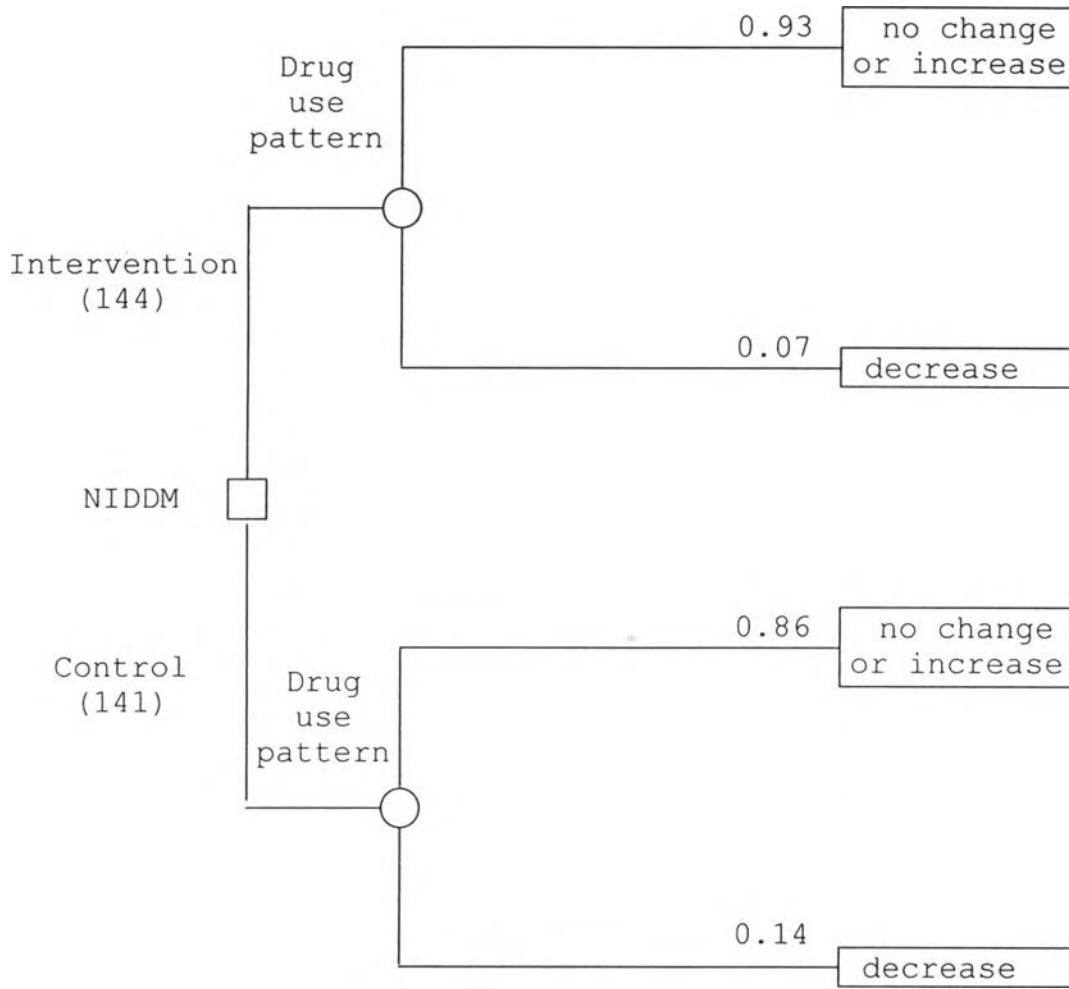
Witness signature _____
()

Physician name _____ Tel. No.2460066
ext.93336
()

Date of participation _____

Appendix 8

DECISION TREE





VITAE

Colonel Ampha Suthijumroon was born on May 20, 1951 in Bangkok, Thailand. She graduated from Chiang Mai University, Chiang Mai in 1975 and earned the degree of Doctor of Medicine(M.D.). She secured the certified Thai Board in Internal Medicine in 1979. She pursued her advanced study in Canada and obtained the Certificate in Endocrinology from the University of Alberta, Edmonton, Canada in 1985. In 1993, the Certified Thai Board in Endocrinology and Metabolism was established and she acquired this Certified Thai Board in Endocrinology and Metabolism in that year. Since June 1995, she has been admitted in the Master Degree Program of Health Development in Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

Presently, her duty is the endocrinologist in charge of the Division of Endocrinology and Metabolism, Department of Medicine, Pramongkutklao Medical College, Bangkok, Thailand.