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Appendices

Appendix 1

Chronic Obstructive Pulmonary Disease patient's Interview

ID.....

Date of interview () Pretest () 3 months () 6 months

A: Demographics

1. Patient's Name
2. Address Moo Mooban.....
Tumbol.....Chiangmuan District Phayao Province.....
3. Age.....years
4. Body weight.....Kgs
5. Gender () Male () Female
6. Marital status () Single () Married
() Widowed () Divorced
7. Occupation
8. Education background
() primary school level () Secondary school level
() Bachelor or higher level () Not educated

9. History of smoking

- Present a smoker Previously a smoker
 Never a smoker

10. Relationship of caregiver

- Wife Husband
 Daughter Son
 Self Self

11. Duration of illness

- Less than 1 year 1 year to 5 year
 Up 5 years 10 years up

12. Pulmonary Function Test FEV1/FVC =

13. Severity of disease

- Mild airway obstruction
 Moderate airway obstruction
 Severe airway obstruction

Appendix 2

B. Summary of the Chronic Respiratory Disease Questionnaire (CRQ)

The questionnaire begins by eliciting five activities in which the patient experiences dyspnea during day to day activities:

1. I would like you to think of the activities that you have done during the last two weeks that have made you feel short of breath. These should be activities which you do frequently and which are important to your day to day life. Please list as many activities as you can that you have done during the last two weeks that have made you feel short of breath. (Circle the number on the answer sheet list adjacent to each activity mentions. If an activity mentioned is not on the list, write it in, in the respondent's own word, in the space provided.)
2. I will now read a list of activities which make some people with lung problems feel short of breath. I will pause after each item long enough for you to tell me if you have felt short of breath doing that activity during the last two weeks. If you haven't done the activity during the last two weeks, just answer "no." The activity are: (Read items, omitting those which respondent has volunteered spontaneously. Pause after each item to give respondent a chance to indicate whether he/she has been short of breath while performing that activity during the last two weeks. Circle the number adjacent to appropriate items on answer sheet.)

1. Being angry or upset
2. Having a bath or shower
3. Bending
4. Carrying such as carry groceries
5. Dressing
6. Eating
7. Going for a walk
8. Doing your housework
9. Hurrying
10. Lying flat
11. Making a bed
12. Mopping or scrubbing the floor
13. Moving furniture
14. Playing with children or grandchildren
15. Playing sports
16. Reaching over your head
17. Running, such as for a bus
18. Shopping
19. Talking
20. Vacuuming
21. Walking around your own home
22. Walking uphill
23. Walking upstairs
24. Walking with others on level ground

25. Preparing meals

26. While trying to sleep

If more than five items have been listed the interviewer then helps the subject determine the five activities which are most important in the subject's day to day life.

3. (a) Of the items which you have listed, which is the most important to your day to day life? I will read through the items, and when I am finished I would like you to tell me which is the most important. (Read through all items spontaneously volunteered and those from the list which patient mentioned).

Which of these items is most important to you in your day to day life?
(List item on response sheet)

The process is continued until the five most important activities are determined. The interviewer then proceeds to find out how much shortness of breath the subject has experienced during the prior two weeks. Throughout the questionnaire, response options are printed on different color cards with which the subject is presented.

4. I would now like you to describe how much shortness of breath you have experienced during the last 2 weeks while doing the five activities you have selected. (a) Please indicate how much shortness of breath you have had during the last 2 weeks while by choosing one of the following options from the card in front of you (green card):

1. Extremely shortness of breath

2. Very short of breath
3. Quite a bit short of breath
4. Moderate shortness of breath
5. Some shortness of breath
6. A little shortness of breath
7. Not at all short of breath

This process continues until the subject's degree of dyspnea on all five of his or her most important activities has been determined. The remainder of the questionnaire asks 15 standard questions, which are identical for each subject. The wording is deliberately repetitions, experience having taught so that the repetition ensures subjects' understanding. Response options are consistently presented as seven point scales. An example of the way the questions are structured follows.

5. In general, how much of the time during the last 2 weeks have you felt frustrated or impatient? Please indicate how often during the last two weeks you have felt frustrated or impatient by choosing one of the following options from the card in front of you. (blue card)
 1. All of the time
 2. Most of the time
 3. A good bit of the time
 4. Some of the time
 5. A little of the time
 6. Hardly of the time

7. None of the time

The wording structure of the other questions is identical, and appropriate seven points scales are offered for each question. The content of the remaining 14 questions is as follow:

6. How often during the past 2 weeks did you have a feeling of fear or panic when you had difficulty getting your breath?
7. What about fatigue? How tired have you felt over the last 2 weeks?
8. How often during the last 2 weeks have you felt embarrassed by your coughing or having breathing?
9. In the last 2 weeks, how much of time did you feel very confident and sure that you could deal with your illness?
10. How much energy have you had in the last 2 weeks?
11. In general, how much of time did you feel upset, worried, or depressed during the last 2 weeks?
12. How often during the last 2 weeks did you feel you have complete control of your breathing problems with shortness of breath and tiredness?

13. How much of time during the last 2 weeks did you feel relaxed and free of tension?
14. How often during the last 2 weeks did you felt low in energy?
15. In general, how often during the last 2 weeks have you felt discouraged and down in the dumps?
16. How often during the last 2 weeks have you felt worn out or sluggish?
17. How happy, satisfied, or pleased have you been with your personal life during the last 2 weeks?
18. How often during the last 2 weeks did you feel upset or scared when you had difficulty getting your breath?
19. In general, how often during the last 2 weeks have you felt restless, tense, or uptight?

Appendix 3

**C: Assessment of exercise capacity by performed the 12 - minute distance walk test
(12MD test)**

How many meters can you walk in 12 minutes? Please walk as far as possible during a 12 - minute period around the perimeter of a measured area.

Pre - test : Activity walking levelmeters

3 Months: Activity walking level meters

6 Months: Activity walking level meters

Appendix 4

D: Perception of Dyspnea after exercise

How much shortness of breath do you have right now? Please indicate by marking the line. If you are not experiencing any shortness of breath at present, circle the marker at the left end of the line.



No shortness of breath

Shortness of breath as bad as can be

Pre-test :The perception of dyspnea after exercise was Centimeters

3 months: The perception of dyspnea after exercise was Centimeters

6 months: The perception of dyspnea after exercise was Centimeters

Appendix 5

GUIDELINE IN-DEPTH INTERVIEWS AND OBSERVATION FORM

Patient's Name

Date.....

Interviewer's name

1. What are the most positive benefits of your involvement in the rehabilitation program?
2. What are the most negative benefits of your involvement in the rehabilitation program?
3. How do you feel about the pulmonary rehabilitation program?
4. What do you view about the relationship with professional?
5. What do your feel about the exercise training?
6. What do you gain from participating in the rehabilitation program?

Appendix 6

GUIDELINE IN-DEPTH INTERVIEWS AND OBSERVATION FORM

1. What are the self-care strategies that you usually used at home?
2. How did you practice exercise and barrier? What types of exercise that you usually practice?
3. How did you feel about home-visit?
4. What do you gain from use the breathing exercise?
5. Have you ever used energy conservation techniques when you have stress? In what way?
6. What are your problems and information you need or want to review today?

Appendix 7

GUIDELINE IN-DEPTH INTERVIEWS AND OBSERVATION FORM

1. How did you follow-up and barrier? (Check follow-up form.)
2. How did you take medicines and barriers?
3. How were your symptoms?
4. How much general health did you have?
5. How much shortness of breath did you have?
6. What were your symptoms improving after participating in the rehabilitation program?
7. What were your symptoms worsening after participating in the rehabilitation program?
8. Have you experienced any changes in how you feel since you participated in the rehabilitation program?

Appendix 8

Curriculum of Pulmonary Rehabilitation Program

Target group: 13 COPD patients.

Place: Health promotion and rehabilitation unit at Chiangmuan hospital.

General objectives: To encourage and empower patients' participation in self-care, develop self-care strategies that promote healthy adaptation to live with their COPD related disabilities.

Session 1: Exploring facts and figures of COPD

Specifics Objectives:

1. To initiate a working relationship between the teams and participants
2. To provide an overview of the pulmonary rehabilitation program

Time: 1 30 hours.

Contents/activities

1. Introduce trainer and team.
2. Introduce an overview of pulmonary rehabilitation and program's objectives.
3. Introduce schedule and organize the learning.
4. Explain COPD in terms that the clients can understand, stress the fact that adherence to the treatment to the rehabilitation program is necessary in order to delay and to prevent complication.

Method: Lecture, Discussion

Evaluation

1. Observation
2. Participants' attention and discussion.

Session 2: Exploring How a COPD Creates Disabilities

Specific Objectives

1. The clients will be able to understand and define changes that occur in the respiratory system as the result of COPD.
2. The clients will recognize and verbalize that COPD is a life-long condition that cannot be cured, but can be controlled.
3. The clients will be able to recognize and describe the symptoms of dyspnea and relate these symptoms to his/her dyspnea episodes

The clients will be able to demonstrate the correct method of pursed lip breathing and chest mobility exercise.

Time: 3 hours.

Contents/Activities

- 1 Working in the small group discussion in the topics as follow:
 - 1.1 What is COPD?
 - 1.2 What are symptoms of COPD?
 - 1.3 What causes COPD?
 - 1.4 Factors that may cause further progression of COPD?
 - 1.5 How does a COPD create disability?

2. The trainer instruction is regarding about the details of each questions.
3. The participants discuss the topics which related to real-life's learner experience.
4. The trainer encouraged the questions and then clarify misconception clients about COPD and it's effect.
5. The trainer instructed in breathing techniques such as pursed - lip breathing and the chest mobility exercise and return demonstrate.
6. The participants demonstrate the collect method of purse lip breathing.

Method: Lecture, discussion, demonstrate

Evaluation

1. Observe the participants' discussion.
2. The participants' attention.

Session 3 Exploring How and Why of Living with a Disability

Specific objectives.

1. The clients will be able to practice health maintenance: dietary, exercise, relaxation technique, prevention of infection related to COPD.
2. The clients will be able to demonstrate the six steps of effective coughing.
3. The clients will be able to identify and describe the sign and symptoms of respiratory infection.
4. The clients will be able to define and describe ways to control his/her environment.

Time : 3 hours

Contents/Activities

1. The trainer allows two patients to review the study content from session1 and 2.

2. The trainer briefs instruction about self-care behaviors of COPD patients in ways to prevent or minimize further respiratory problems, maintain an adequate nutrition status, relaxation technique, effective coughing, and energy conservation technique
3. The trainer demonstrates the effective coughing, relaxation technique, energy conservation techniques and allow the participants to practice on the variety of techniques together.
4. The trainer assists and discussed with the participants to identify the ways they can make appropriate changes in personal habits and life style.
5. The trainer allow time to questions, clarify and to return demonstration.

Evaluation

1. Observation
2. The participants' attention in class and correct demonstration.
3. The post test.

Session 4: Exploring How a COPD medications work.

Specific objectives: The clients will be able to understand and describe the names, actions, side effects, methods of administration, and importance of medication prescribed

Time: 3 hours

Contents/Activities

1. Reviewing the previous study.

2. The trainer explains the medication use to treatment COPD including the names of medications, the action, the rationale for, side effect, and the importance of taking medication prescribed.
3. The trainer instructs in proper use of metered-dose inhalers (MDI). Allow time for clients to practice the techniques.
4. The trainers reinforced to the participants about the need to consult health care provider before taking additional prescription and nonprescription medications.
5. The trainer allows the participants to practice an effective coughing, pursed lip breathing and practiced chest mobility exercise together.

Evaluation

1. The in-class participants' attention
2. Observation the participants' demonstration.
3. The participants' knowledge and skills associated with the experience in class.

Session 5: Exploring creative ways to enhancing a positive life-style

Specific objectives

1. The clients will be able to know and recognize that the exercise practice is the correct appropriate ways to enhance and maintenance their life healthy.
2. The clients will be able to identify the type of exercise, the frequency, the intensity of the exercise and how to make progress to higher levels of fitness.

Time: 3 hours

Contents/Activities

1. The trainer instructs the participants about the importance of the exercise practice as the ways to slow disease progression and prevent or delay the development of complication.
2. The trainer instructs and demonstrates the suitable exercise training.
3. Allow the participants to practice varieties of exercises.
4. Encourage clients to participate in regular exercise practice and encourage clients to discuss his/her concern regarding the type of the exercise, the intensity and the frequency to do.

Evaluation

1. Observation
2. Group exercise.
3. Group discussion.

Session 6: Exploring Living With COPD**Specific objectives**

1. The participants will be able to recognize and review the components in previous classes.
2. Participants will be shared personal insights gleaned from the course.

Time: 3 hours

Contents/Activities

- 1 The trainer reviewed the components in previous classes.

2. Provide the participants with written instructions about the breathing techniques, chest mobility exercise, ways to prevent further respiratory problems, prescribed medications, sign and symptoms to report, and future appointments with the rehabilitation team.
3. Participants were encouraged to identify activities that enhanced a positive lifestyle and continued with simple exercise at home.
4. The trainer provides instruction about home based rehabilitation program and the home exercise practice for each patient.
5. The trainer allows time to questions, clarify and allow the participants to practice group exercise together.

Evaluation

1. Observation
2. Group exercise and discussion.

Appendix 9

Table 3.35: Individual data of the 13 COPD patients in the pulmonary rehabilitation program.

No	Age	Age group	duration	smoking	severity	Predys	threedys	sixdys
1.	48	1	1	2	1	16	30	28
2.	63	3	2	3	3	15	17	18
3.	78	3	3	2	1	19	25	17
4.	72	3	8	1	1	26	31	34
5.	60	2	5	2	3	16	18	20
6.	52	2	3	3	1	14	29	30
7.	42	1	8	2	1	20	22	22
8.	59	2	2	2	1	26	28	30
9.	55	2	3	2	1	15	27	30
10.	66	3	5	2	1	16	19	21
11.	61	3	7	2	2	24	26	26
12.	55	2	2	2	1	10	16	17
13.	64	3	5	2	1	20	23	26

Table 3.35: Individual data of the 13 COPD patients in the pulmonary rehabilitation program. (continue)

No	prefit	threefat	sixfat	premo	Threemo	sixmo	Premas	threemass	sixmas
1.	20	22	24	34	35	45	16	24	24
2.	21	27	19	40	40	39	21	25	24
3.	21	22	24	40	32	36	16	26	26
4.	22	23	23	44	40	47	20	17	26
5.	19	18	20	46	36	36	18	15	19
6.	23	26	28	45	43	46	27	18	28
7.	23	23	24	46	48	42	28	25	24
8.	20	21	24	35	35	35	13	11	12
9.	18	26	28	33	41	48	15	17	28
10.	14	21	22	28	37	39	13	13	22
11.	22	23	27	39	36	46	22	21	23
12.	16	18	27	27	28	43	23	15	26
13.	28	28	28	46	42	47	26	25	25

Table 3.35: Individual data of the 13 COPD patients in the pulmonary rehabilitation program. (continue)

No	prevas	threemas	sixmas	prewalk	threewalk	Sixwalk
1.	4.3	1	1	680	712	911
2.	6.5	2	3	685	835	803
3.	2.3	1	1	646	743	748
4.	2	1	1	692	681	700
5.	6.5	4	4	690	712	745
6.	1.3	1	1	670	743	800
7.	1.3	2	1	738	712	753
8.	1	1	1	721	743	824
9.	1.5	1	1	666	774	782
10.	5.2	3	2	48	50	60
11.	2.7	1	1	630	774	908
12.	3	2	1	640	774	856
13.	3.7	1	1	414	774	703

Appendix 10

THE PROJECT TEAM

The project Manager

Mrs. Nukul Ploybutr

Director of Nurse, Division of nursing.

Chiangmuan Hospital, Phayao Province, Thailand

The project Member

1. Mrs. Ludda Rathchatajai

Register nurse, Level 6, Division of nursing.

Chiangmuan Hospital, Phayao Province, Thailand.

2. Ms. Jirapa Chareansook

Register nurse, Level 7, Division of nursing

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3. Ms. Matthana Sombatwattanavate

Pharmacist, Level 6, Community Pharmaceutical department

Chiangmuan Hospital, Phayao Province, Thailand.

4. Ms. Wunpen Srithana

Register nurse, Level 5, Division of nursing

Chiangmuan Hospital, Phayao Province, Thailand.

Curriculum Vitae

- Name:** Nukul Ploybutr
- Present address:** Chiangmuan Hospital , Chiangmuan district, Phayao Province, Thailand.
- Date of birth:** 18 April 1960.
- Place of birth:** Phayao, Thailand.
- Citizenship:** Thai.
- Religion:** Buddhist.
- Marital status** Married.
- Education:**
- 1982 Diploma in Nursing and Midwifery (Equivalence to B. Sc. in Nursing), Lumpang Nursing College, Lumpang Province. College of Nursing Affair Division Under-secretary State, for Public Health Ministry of Public Health, Thailand.
- 1988 Degree of Bachelor of Public Health, Sukhothai Thammathirat open University, Nonthaburi, Thailand.
- Experience:**
- 1982-1986 Nursing staff at out-patient Unit, Chiangmuan Hospital.
- 1986-1987 Nursing staff at in-patient unit, Pong Hospital, Pong district, Phayao Province.
- 1988 - 1990 Chief of Emergency room at Chiangmuan Hospital.
- 1990 - 2002 Director of Nurse, Nursing Organization, Chiangmuan Hospital.

