CHAPTER III

OBJECTIVES

RESEARCH QUESTIONS AND DEFINITION OF TERMS

3.1 Objectives of the Study

3.1.1 General Objective

The general objective was to improve care in terms of effectiveness for patients with chronic diseases, using epilepsy as a case study.

3.1.2 Specific Objectives

The specific objectives were to compare epileptics receiving either conventional care (CC) or shared care (SC) in respect of:

1. Effectiveness, in terms of regular follow-up, seizure control, and reduction of inappropriate practices
2. Quality of life (QOL)
3. Patient satisfaction

3.2 Research Questions

3.2.1 Primary Research Question

When comparing SC with CC among epileptics in Nakhon Ratchasima Province, does SC result in a 50% relative gain in regular follow-up as a percentage over CC, considering the effects on both, and within, genders?

3.2.2 Secondary Research Questions

When comparing SC with CC in epileptics (within the same gender group) in Nakhon Ratchasima Province, does SC result in:

3.2.2.1 Over One-Year Period

1. Higher frequency of regular follow-up
2. Better rate of regular follow-up (survival analysis)
3. Increase in regular follow-up after one-year of study
4. 50% or more reduction in seizures after one-year of study

3.2.2.2 Comparing the Three Months before the Study and the Last Three Months of the Study

1. reduction in seizure frequency

3.2.2.3 At the End of the Study

3.2.2.3.1 Quality of Life in Epilepsy (QOLIE-31) Score

1. Higher mean score for total QOLIE-31
2. Higher mean score for overall QOL domain in QOLIE-31
3. Higher mean score for social functioning domain in QOLIE-31

4. Higher mean score for energy and fatigue domain in QOLIE-31
5. Higher mean score for emotional well-being domain in QOLIE-31
6. Higher mean score for cognitive functioning domain in QOLIE-31
7. Higher mean score for medication effect domain in QOLIE-31
8. Higher mean score for seizure worry domain in QOLIE-31
9. Higher mean score for overall health domain in QOLIE-31

3.2.2.3.2 Short Form 36 Health Survey (SF-36) Score

1. Higher mean score for total quality of life in SF-36
2. Higher mean score for physical functioning domain in SF-36
3. Higher mean score for role physical domain in SF-36
4. Higher mean score for bodily pain domain in SF-36
5. Higher mean score for general health domain in SF-36
6. Higher mean score for vitality domain in SF-36
7. Higher mean score for social functioning domain in SF-36
8. Higher mean score for role emotional domain in SF-36
9. Higher mean score for mental health domain in SF-36
10. Higher mean score for health transition domain in SF-36

3.2.2.3.3 Overall Patient Satisfaction

1. Higher percentage for overall patient satisfaction with health care

3.2.2.4 Evaluating Processes of Shared Care for Epileptics in Nakhon Ratchasima Province

In the SC group, do SC interventions result in:

3.2.2.4.1 Comparing the First and Last Three Months of the Study

1. Reduction in inappropriate practices

3.2.2.4.2 During the Study

1. Usefulness of treatment review and immediate feedback

3.2.2.4.3 At the End of the Study

1. Usefulness of pamphlet and education
2. Usefulness of problem-based education

3.2.2.5 Evaluating GPs' Communication across CC and SC at the End of the Study

1. Is there communication by general practitioners (GPs) across treatment groups?

3.3 Operational Definitions

3.3.1 Seizure, Epilepsy and Mental Retardation

1. Seizure in this study is defined as "an abrupt, brief episode of disturbance of cerebral function that starts suddenly and usually arrests spontaneously. The seizure may have altered state of consciousness that may or may not have been accompanied by characteristic body movements, by specific mannerisms, by altered

sensations, intelligence, perceptions of the environment and/or autonomic symptoms" (ILAE, 1993).

2. Epilepsy is defined as "a condition characterized by recurrent (two or more) seizures unprovoked by any immediate identified cause, drug, alcohol, or fever in a child aged 6 months to 5 years. Multiple seizures occurring in a 24-hour period will be excluded without recourse to electroencephalography (EEG)" (ILAE, 1993).

3. Type of epilepsy:

- "Cryptogenic unprovoked epilepsy of unknown etiology" is defined as partial or generalized unprovoked epilepsy in which no factor associated with increased risk of seizures has been identified (ILAE, 1993).

- "Remote symptomatic unprovoked epilepsy" is defined as seizures which occur more than a week after head injury or cerebrovascular disease (CVD); as a sequela of central nervous system (CNS) infection; related to alcohol, with no evidence of acute withdrawal or intoxication (ILAE, 1993).

- "Idiopathic unprovoked epilepsy of unknown etiology" is defined as a certain partial or generalized epileptic syndrome with particular clinical characteristics and specific electroencephalography (EEG) findings (ILAE, 1993).

- "Symptomatic unprovoked epilepsy associated with progressive neurological conditions" is defined as seizures occurring in association with a condition characterized by a pathophysiology that is in evolution or in relation to abnormalities associated with existing damage, including incompletely treated CNS tumors or bacterial, fungal, or viral infections; subacute sclerosis panencephalitis; lupus or multiple sclerosis (ILAE, 1993).

- Acute symptomatic epilepsy or situation-related epilepsy is defined as seizures which occur: 1) within 7 days of traumatic brain injury or are of any CVD; 2) in the course of active CNS infection; 3) as the presenting symptom of a CNS tumor; 4) in the postoperative period of an intracranial neurosurgical intervention; 5) during the time of exposure to drugs or drug overdose or elimination of drug or alcohol; and 6) in relation to systemic disturbances or with fever (ILAE, 1993).

4 Mental retardation (Cruz ME, et al., In 1985) is defined as slow psychomotor development, inability to attend school or to engage in age-appropriate activities without assistance, and clumsiness in speech and movement.

3.3.2 Regular, Irregular, and Lost to Follow-Up

1. "Regular follow-up" is defined as epileptics or their relatives visiting every appointment made with the GP, on the appointment date or within seven days thereafter because some epileptics could not come on the appointment date, but ask their relatives to visit the doctor on their behalf. It means they do not want to miss their appointment. In addition, the 7-day post-appointment period is allowed because the average steady state of antiepileptic drugs (AED) is about seven days, i.e., patients will they have AED withdrawal seizures only if they come to the hospital more than 7 days after the appointment date.

2. "Irregular follow-up" is defined as epileptics or their relatives visiting on a date more than 7 days after the appointment date.

3. "Lost to follow-up" is defined as epileptics not visiting the community hospital or clinic for at least six consecutive months.