CHAPTER I

INTRODUCTION

1.1 Problem Statement

Chronic Obstructive Pulmonary Disease (COPD) is a chronic disorder of the respiratory disease, characterized by the presence of airflow obstruction due to emphysema or chronic bronchitis and the airflow obstruction is generally progressive. (American Thoracic Society, 1995). Two disorders are incorporated in COPD: emphysema and chronic bronchitis. Any individual patient may have one or all of this condition but the dominated clinical feature in COPD is always impairment, or limitation of expiratory airflow. COPD is usually diagnosed in the middle to later year of life after a long history of gradually worsening dyspnea, coughing, disability, low energy level, and increase sputum production. Causative factors of COPD include chronic irritation of the lungs by cigarette smoke, exposure to air pollution and chemical irritants and chronic recurrent respiratory tract infection. Extensive evidence suggests that smoking behavior is the major risk factors for the development of emphysema and chronic bronchitis.

Chronic Obstructive Pulmonary Disease (COPD) has become a major public health problem worldwide. In the United States, approximately 16.4 million people suffer from this disease. Chronic Obstructive Pulmonary Disease is the fourth leading cause of death in the United States. In 1996, approximately 100,360 people died as a result of COPD. The annual cost to the nation for COPD is approximately $30.4 billion, including healthcare expenditures of $14.7 billion and indirect costs of $15.7 billion. In the United Kingdom, surveys of people with chronic lung disease by the British Lung Foundation suggest that 90% of chronic lung disease is due to chronic airflow obstruction. There are approximately 600,000 people with COPD.

In 1995, Thailand's public health statistics revealed that COPD was the leading cause of death, accounting for about 3,000 deaths per year. In 1995, the morbidity rate of in – patients unit affected by COPD was more than 177 per 100,000 of the population. (Public health statistics, MOPH, 1996)

In 1998, in Phayao Province, Northern Thailand, diseases of the respiratory system included COPD was the first leading cause of illness in out-patients units which accounted for 46,755 per 100,000 of the population. Additionally, COPD was the sixth leading cause of hospitalization, which accounted for 357 per 100,000 of the population (Phayao health statistics, 1998).

In Chiangmuan district, Phayao Province, although the number of individuals suffering from COPD was not clearly defined but the hospital data showed that from 1996 to 1998, the hospitalized caused from COPD increased from 68 to 138 cases. In

1999, a total of 139 admissions were admitted with the primary or secondary diagnosis of COPD accounted for 8 percent of all hospital admissions. The hospital days of COPD hospitalization were approximately 700 days. The out –patient data in 1999 also indicated that COPD was the secondary cause of morbidity of the respiratory diseases system. The morbidity from Chronic Obstructive Pulmonary Disease (COPD) included 200 emergency visits and 1,300 out-patient visits within one year. (Chiangmuan Hospital statistic, 1996-1998)

Chronic Obstructive Pulmonary Disease (COPD) has become an important district health problem due to four main reasons. First, COPD is among the top five leading causes of morbidity for both out-patient and in-patient visits. Second, there is an increasing incidence of COPD. Third, it causes a long length of hospital stay. Lastly, it has a major impact upon activities of daily lives of the COPD patients.

Respiratory diseases are generally considered to be of the greater importance as causes of disability and ill health than as causes of death. Studies that deal with the long-term course and prognosis of COPD indicate that the process covers a time span of at least 20-30 years and possibly longer. (Petty, 1978) According to the International Classification of Impairments, Disabilities, developed by the World Health Organization (1980), patients with COPD are considered to be respiratory impairment from airflow obstruction, which generally regarded as being irreversible. A respiratory disability refers to the inability to perform an activity in the manner within the normally expected range and the respiratory handicap represents the disadvantage

resulting from an impairment or disability within the context of the patient's ability to perform in society or fill with expected roles.

With a disease characterized by slowly progressive, irreversible airway obstruction, the patients developed symptoms becoming more severe, and having an impact on the patient's activities of daily living. Dyspnea, the sensation of difficult breathing, is the frequent and distress symptom experienced by COPD patients. Dyspnea has been considered the primary activity-limit symptom and usually the major cause of disability in patients with COPD. Patients often become homebound, isolated, and depressed as they seek to avoid the dyspnea that everyday activities produce. It contributes to a lower quality of life, a decrease functional status, and an increase risk of death.

There is no cure for COPD. Medical management includes the use of antibiotics, bronchodilators, and related medical complications that are only symptomatically beneficial. Pharmacological treatment has not influenced the natural history of the disease or its evolution. Many patients still remain symptomatic and continue to have decreased function despite standard medical management.

In Chiangmuan hospital, the management of COPD comprises of only a medical treatment. However, it is realized that there is a need to develop new intervention to improve quality of care for those patients. The new program should be directed at reducing symptoms, improving functioning status and health maintenance, slowing of progress of disease, and producing strong improvement in quality of life. In 1999, the

American Thoracic Society (ATS) stated that pulmonary rehabilitation in patients with COPD is highly effective in improving patients' outcomes. It can reduce symptoms, decrease the degree of disability, increase the patients' participation in physical and social activities and improve the patients' quality of life. The multidisciplinary professional who involved in caring COPD patients in Chiangmuan hospital are committed to develop the pulmonary rehabilitation program as a new strategy to improve quality of care for COPD patients.