CHAPTER III

RESEARCH QUESTION AND DESIGN OVERVIEW

Primary Research Question

In intensive care units, Maharaj Nakorn Chiang Mai
Hospital, what is the percentage of acceptable ventilator care
(assessed by the criterion standard) provided by nursing personnel?

Secondary Research Question

What are the factors affecting the quality of mechanical
ventilator care?

Objectives of the Study

The objectives of this study are:

1. To determine the quality of mechanical ventilator care
among nursing personnel in the intensive care units at Maharaj
Nakorn Chiang Mai Hospital, Chiang Mai.

2. To determine the factor(s) affecting the quality of
mechanical ventilator care.

3. To give the appropriate recommendation(s) regarding
mechanical ventilator care, based on sound research results in
order to improve the quality of care.

Operational Definition

The quality of mechanical ventilator care is a quality of nursing care by focusing on the actual nursing activities provided for patients who require mechanical ventilation and comparing with the criterion standards. The standards were adopted and adjusted by the investigator from the Center of Disease Control (CDC) guideline for prevention of nosocomial pneumonia and quideline ranking scheme category I (US Department of Health and Human Services, 1982), Handbook of Nursing Practice (Surgical and Orthopedics Nursing Department, Faculty of Medicine, Chiang Mai University, 1988) and from related literature about ventilator care which are strongly supported by well designed and controlled clinical studies that proved to have the effect to the outcomes or were viewed as useful by the majority of experts in the field.

Nursing personnel are male and female nurses and practical nurses who are working in the intensive care units at Maharaj Nakorn Chiang Mai Hospital, Chiang Mai.

Design Overview

The study design was a cross-sectional descriptive study. The primary concern was to determine the quality of mechanical ventilator care by focusing on actual nursing activities provided for patients who require mechanical ventilator by nursing personnel in the intensive care units and comparing with criterion standards which the investigator adopted and adjusted from CDC guideline for prevention of nosocomial pneumonia and quideline ranking scheme

category I (U.S. Department of Health and Human Services, 1982), Handbook for Nursing Practice (Surgical and Orthopedics Nursing Department, Faculty of Medicine, Chiang Mai University, 1988) and from related literature about ventilator care which were strongly supported by well designed and controlled clinical studies to affect the outcome and which were viewed as useful by the majority of 6 experts in this field.

The two information collection forms were used to collect data: a ten procedure-observational checklist and a questionnaire. The study was taking place at 5 intensive care units with the same admission requirements. Plan for the study included direct observation of nursing personnel while they were providing care for their patients who required mechanical ventilator by using the observational checklist. All study subjects were blind in order to prevent the Hawthorn effect. After finishing the observation process, demographic information and knowledge assessment were performed by using questionnaire, focusing on the weak point(s) from observational results.

The sample consisted of all nursing personnel who were working in the intensive care units during the period of study and participating in mechanical ventilation care. The procedures employed on the patients who were admitted in the intensive care units and required mechanical ventilation were our unit of study.

A nine-month study program started from the third week of March, 1991 to the third week of December, 1991. The investigator together with a helper were responsible for gathering of the data.

The investigator was responsible for managing the overall study program. The data were coded and entered into the computer. The measurements of actual nursing activities compared with the criterion standards were summarized as percentage at the end of observational period by using descriptive statistics. The correlation between knowledge and practice was then computed by using multiple logistic regression.